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Textile World

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Do Many Things at the Same Time!

THE human mind tends automatically toward a single track. We say this, not out of any profound knowledge of psychology, but as the result of observation—both of ourself and others.

This fact, we presume, accounts for the intensity with which an industry or an individual manufacturer concentrates for a while upon some one phase of management almost to the exclusion of all other phases—until a new impulse switches the industry or the man into another field of thought.

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In textile manufacture, we have had many such cycles. There was a period when the tariff dominated men's minds; there were certain years in which industrial relations plans monopolized the time and thought of most mill men; there was a period when production technique was all-important; there has been, more recently, a tendency on the part of some to ignore mill management and to think only of selling.

In itself, none of these thought phases is inexplicable; all in fact are vitally important and helpful. It is only in the tendency to subordinate all other considerations to the dominant phase of the moment, that the danger lies. For it can be said without fear of contradiction, that no industry and no man can achieve optimum results without balanced and continuing consideration, simultaneously, of all the major problems of management: production technique, selling methods, human relations, machinery maintenance, cost determination, etc.

That sounds trite. Any manufacturer of adult mental age will agree to it in principle. But, unfortunately few apply it to their own businesses.

We know large companies in which careful organization has produced men and departments, each with a specific and jealous interest in one of these phases—and coordinated by a broad-visioned control board. We know one-man mills whose proprietors are sufficiently alert and flexible to give consideration to all problems in proper proportion. The majority, however, have no such balance.

The method of securing it is not easy. It cannot be set down as a rule or as a formula.

The starting point is, of course, the development of due appreciation of the importance of such balance. The follow-through demands, first, a systematic delegation of functions, whether among a few department heads in a small company or among hundreds in a great organization; and, second, a method of organized control, both to coordinate the diverse activities and to check results. Nothing can be left to chance; it is surprising how quickly some one vital factor of management can get lost in the shuffle.

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The various branches of the industry, through their trade organizations, have given careful thought recently to this question of balancing activities. Most of them are so shaped that no one phase is ignored at the expense of the others. This type of thinking must spread to a larger number of mill units.

Otherwise we shall continue to have an industry which is making "fundamental progress" and is in a "sound statistical position," but which is composed mainly of companies flirting with bankruptcy; we shall continue to produce brilliant annual reports at associational meetings, and tragic reports at stockholders' meetings.

The Week in Textiles

as Reflected in This Issue

General

"Labor Specialization"

Successful application of "labor specialization" plan depends, in large measure, upon setting tasks for operatives properly, making sure the work runs as planned, and using patience in selling the idea to the operatives. *(page 16)*

A Mill Laboratory

Pictures of the laboratory of the Danvers Bleachery & Dye Works, controlled by the Naumkeag Steam Cotton Co., show the completeness of this organization's development of a research and control program. There are three major departments: physical, microscopical, and chemical. *(page 21)*

Knowing Costs

The worst single error of the textile industry is the failure of many mills to know their costs, in the opinion of a seasoned cotton mill superintendent. "No business is stronger than its balance sheet," he says. *(page 25)*

Wear-Testing Machine

Although many types of wear-testing machines have been placed upon the market, the results obtained from their use must not be taken too seriously. Comparative results are the best that can be secured and any attempt to determine the exact life of a fabric by this method is doomed to failure. A machine which has been used with good results is described. *(page 29)*

Cotton

Power for Spinning

Interesting tests disclose the power consumption of various parts of the spinning frame and establish a basis from which the size of motor required to run a given machine can be calculated. *(page 18)*

Cotton Legislation

Legislatures of the southern States are playing with the idea of a cotton-planting moratorium, led by Louisiana which has decided to prevent any planting of cotton if States representing 75% of the crop do likewise. *(page 31)*

Large but Late Crop

The Government crop estimate of 15,685,000 bales confirms the first estimate, and probably because in line with expectancy, had no depressing effect on the market. Because ginnings were 1,000,000 bales behind figures to same date a year ago the harvest will doubtless be late and pressure of heavy receipts may not be felt till late October. *(page 47)*

Limited Yarn Business

Interest in cotton yarns continues to expand but it is not resulting in much business. Buyers are operating only under pressure of actual current needs. Prices are fairly firm and sellers are hopeful that broader covering will be evident later in the month. *(page 47)*

Goods Still Hopeful

Cotton goods have had their optimism confirmed in the fact that the raw material was steady following the recent Government crop report which confirmed the expectancy of over 15½ million bales. Although a broad market may not develop until later in the fall, the last two weeks of September should be much better than the first two. *(page 49)*

Wool

Suiting Fabric

A silk and wool mixed fabric having a small silk stripe is finding favor for men's wear. The analysis and design for this fabric is outlined. *(page 24)*

Wool Progress Limited

The prospect is for large consumption of raw wool by mills for several months with a consequent firmness in raw material prices, states Dr. L. H. Haney in this week's TEXTILE WORLD Analyst. However, lack of vitality in general business limits this trend and better control of production is necessary if decent margins of profit are to be had by mills. *(page 43)*

Low Prices Sought

There has been good call for worsted yarns for prompt delivery. Knitters are most in evidence with weavers doing a little in advance of fabric openings. A range of prices is quoted owing to variation of quality of wool and buyers are most interested in rock bottom without respect to quality. *(page 47)*

Quieter Wool Market

A quieter wool market is reported at Boston. Buyers are cautious and selecting their lots with unusual care. The medium grades are hardest to find, but the market generally holds its position despite inactivity. *(page 48)*

Cloaking Prices Weakening

Weavers of women's cloakings complain buyers hold off on coverage which

The Textile Outlook

THE "Wait and See" attitude persists in a number of textile markets but it is not hurting the strong statistical position in which mills have placed themselves by intelligently controlled production. The fall upturn has been disappointing but the more far sighted merchants see as merely postponed the eventful day when the growing vacuum of textiles in distributors' hands must be satisfied. In cottons the Government crop report, which confirmed the first estimate, left traders unmoved. Certain buyers expect cotton to fall still lower when the full weight of the crop starts to move and they are holding back cloth orders to take advantage of bottom. This expectancy is so widespread that speculative anticipation of it may make so many traders short of the market that a new bottom will not be realized. Wool goods are quieter and the outlook is not so bright as two months back. Mills' production rate must be reduced if decent margins are to be obtained. Silk and silk goods are steady and hopeful. Knit goods have been quiet but the prospect for a fair fall persists.

is ascribed to growing belief in an October price break; stocks have increased. *(page 49)*

Knitting

Securing Handle in Knit Fabric

Proper choice of raw stock and careful selection and regulation of the processes to which it is subjected, are important in obtaining that degree of resiliency and full handle so desirable in a knitted fabric. *(page 22)*

Those Semi-Nude Bathers

Growing vogue among men bathers, especially on Pacific Coast, to discard upper half of the two-piece swimsuit and wear trunks only, is worrying the bathing-suit industry. Already it has hurt the sale of two-piece suits, knitters say. *(page 30)*

The Why of Hosiery Bargains

One explanation of current hosiery bargains is suggested in the claim made this week by mill agents that some firms sell standard full-fashioned hosiery as inferior at reduced levels. *(page 50)*

New Lines for Underwear Mills

Fearing that heavyweight underwear is no longer a real American need, these mills gradually turn to other lines. One firm recently began making bathing-suits and this week added a line of knitted rayon pajamas. *(page 50)*

Silk

Upholds Its Advice to Consumers

Consumers' Research, Inc., through its technical director, F. J. Schlink, answers the criticisms of its advice to consumers on silk goods made by Frank D. Cheney, of Cheney Bros., and published in our issue of Aug. 1. *(page 28)*

Holiday Slows Up Movement

Raw silk is quiet due to holiday reaction but market hopes for improvement when weavers begin to get reorders next week. *(page 48)*

Cotton Situation Center of National Interest

THE issuance Tuesday of the Government cotton crop report as of Sept. 1, showing increase of about 100,000 bales over August report, and the attention given to the cotton situation by President Hoover in conferences this week, focused national attention upon the staple.

One of the plans discussed was the establishment of credits for exports of cotton to foreign countries. It is understood that negotiations have been started with Germany, France and Poland looking toward a possible agreement whereby cheap cotton and ample credit would be made available to purchasers with ample security in those countries.

Senator Caraway placed before the President the plan whereby the Farm Board would purchase about 8,000,000 bales of this season's crop at 8c. per lb. and allocate it at that price to growers who refrain from planting in 1932—the growers of course to get the benefit of the price increase which would be expected to accrue. No word was given out regarding the President's reaction to this plan.

The encouraging inference to be drawn from this week's developments at the time of going to press, was that the best thought of the country was being directed to the cotton situation and that constructive steps might be anticipated.

Yarns in Better Position

Stronger buying tone has helped both thrown and spun silk markets though sales are only moderate. *(page 48)*

Cheap Dresses Cheapen Fabrics

A trade-down trend in dresses has accented the call for low-priced cantons and better grades are slow. *(page 49)*

Rayon

Inferior Stocks Decline

Decline in available stocks of inferior has been a considerable factor in making for the present healthy position of rayon merchandising. *(page 48)*

DuPont Cuts Acetate Yarn

A drastic cut in acetate yarn prices which other producers claim almost eliminates profit, is announced by DuPont Rayon Co. Other companies are expected to follow suit. *(page 55)*

The Business Outlook

SLIGHT but belated signs of the autumn acceleration of activity appeared in the pre-Labor Day week. Railroad movement of merchandise freight at last turned upward after a depressing period of persistent decline. Check payments gave some promise of responding to seasonal influences. Building contracts also improved from the disappointing early August level. Our index, after touching new lows in the middle of the month, rallied a little. Steel activity and power production alone reflect uncertainty about the extent of the usual fall flurry. Though the seasonal turning point has passed, business is still not sure where the street leads. Fundamentally reassuring are the relative stability of commodity prices in face of burdensome surpluses, and the progressive weakening of the successive waves of reaction to unfavorable news in the security market, as the forces of deflation wear themselves out. While the ultimate issues in the European situation are still in suspension the immediate emergencies seem to have been successfully handled.—*The Business Week.*

Processing

Chemical Handling Equipment

The purchase of corrosion-resisting containers and other handling equipment for chemicals is said to be justified by the fact that their permanent nature eliminates the need for costly repairs and replacements. Most corrosive materials used in the textile industry are manufactured in stoneware. *(page 26)*

Stock Lubrication

The possibility of using diethylene glycol as a lubricant and conditioner of wool stock has created considerable interest in the industry. How it is used and the results which have already been obtained are discussed. *(page 38)*

Chloring

Although the chloring of wool has a decidedly beneficial effect on some types of goods, only a small quantity has been so treated in this country. Details of this process together with its advantages are discussed. *(page 40)*

Color in Full-Fashioned Hosiery

There are several reasons why the silk in the foot of stockings will dye differently from that is the leg. Some of the more common causes together with preventive measures which may be employed are discussed. *(page 41)*

Defect From Carbonizing

In carbonizing piece goods in the open width, care should be taken that all acid is removed before the material is sent into the drying chamber. *(page 41)*

Dyeing Silk-Wool Mixture

Neutral-dyeing acid dyes tend to give uniform shades on a fabric made up of a silk and wool mixture. Precautions to be taken in dyeing goods of this nature are outlined. *(page 41)*

Experience Indicates Technique for Applying "Labor Specialization"

By James A. Austin
New England Editor, TEXTILE WORLD

ENOUGH trouble has been caused in application of the labor specialization plan to convince mill managements that the technique of its application is worth serious consideration. In some quarters opinion is expressed that local conditions make it impossible to adopt the plan; in others there is talk of "jamming it through regardless." Preponderance of evidence, however, proves that neither attitude is correct. In examining successful applications it is obvious that varying amounts of difficulty were encountered, but it is noticeable that in practically every case careful and thoughtful consideration was given to the following points:

1. Sound engineering to start with.
2. Insistence that the running quality of the work upon which quality plans are based, is actual at time plans are put into effect, and that these standards are maintained thereafter.
3. Careful preparation to secure the greatest possible cooperation from all employees, down to the lowest ranks affected.
4. Patience in application.
5. No changes without engineering as sound as that which developed original plans.

Competent Engineering Necessary

On the fundamental soundness of labor specialization and its benefits to all concerned there can be no argument. It is the technique of application which concerns mill men, since responsibility for success or failure rests, in the last analysis, with the mill management. Obviously, this responsibility starts with securing sound engineering and is continued through the necessity for a full measure of cooperation.

Whether the engineering is done by individuals hired by the mill on a permanent basis, or whether it is done by an outside engineeding concern, it is equally essential to secure first-class engineering ability. There have been cases where an individual with little more than the title of engineer was retained and turned loose in the plant while the management sat back and waited for the miracles. There have been many more cases where selection of individuals or an engineering concern was made only after careful and detailed investigation. The relative merits of the two methods are obvious.

Responsibility does not cease once the management has assured itself that the engineering will be sound. Good engineering includes an ability to cope with many obstacles, but good engineering work can be, and has been, wrecked by indifferent cooperation on the part of management. As one mill man has put it: "I may take great care in choosing a physician, but he can't do much if I just lie back and say, 'You're the doctor so you just go ahead and do your stuff without bothering me and questioning me.'"

The manufacturer, who said "if John Smith can jump from 16 to 48 looms per weaver in his mill I can do it here" and who posted a notice that the change would go into effect Monday, might have had a slight chance of getting away with it if he had assured himself that the work was running as well in his mill as in John Smith's, but without taking care of this factor he never had a chance.

A good part of an engineer's job in working out labor specialization lies in fields other than merely re-arrangeing taske; it lies in decreasing the amount of work necessary to take care of each machine so that there will be less ends down per frame, less stops per loom, etc. In fact this work is an integral part of a labor specialization plan.

Poor running work will quickly cause discord in any mill, and mills operating under labor specialization are no exceptions; in fact, here the work is so finely geared that variations are more serious. Difficulty lies in the fact that, with labor specialization, a comparatively small amount of poor work will throw things out of line. Consequences of an apparently minor variation go further than is usually realized. If engineers lay plans which are too conservative, and which do not allow for more than the slightest variations, maximum efficiency cannot be secured. This makes it important to follow the engineering very closely.

One mill was running on an average of 2 stops per loom per hour. The engineers were able to reduce the stoppage to 1.6 stops per loom per hour and plans were laid for a labor lay-out based on this figure. Soon after starting on the new plan the manufacturer checked and found that the loom stops were 1.75 per hour. He figured that the difference was not so great, assuming that the engineers had left some leeway, and, after issuing a general warning to be more careful, he went on to more important matters. He was surprised to hear, in a few weeks, that the operatives had given the new system a fair trial and were greatly dissatisfied. What he had failed to realize was that under the new plan of many more looms per weaver a difference of 0.15 stops per loom mounted up. Fortunately, in this case, he realized his mistake and, with the aid of the engineers, matters were straightened out. This is merely one of many cases which demonstrate the necessity of following engineering advice carefully and exactly.

Selling Plan to Operatives

The responsibility of management is particularly great when it comes to dealing with the employees. It is, of course, obvious that the greatest cooperation will be secured where employees are really convinced that the new plan will be beneficial to them rather than where

they are merely told that "everything will be all right." Good engineering takes the human factor into consideration, but a major portion of the effort along this line rests upon management. In the long run careful preparation will be amply repaid by the lack of costly dissatisfaction and disturbance.

The superintendent of one eastern mill who believes thoroughly in the importance of this work tells of his experience as follows:

"We waited some time after the engineers had left before we attempted to put their plans into operation. This delay was partly because we wanted to be sure we had the work running correctly, and partly because the operatives are always a little suspicious of strangers in the plant and we wanted this feeling to die out. In the meantime, we started to get the operatives thinking in terms of loom stoppage, carefully explaining that stoppage was of vital interest to them. We put tags on the looms and asked them to mark every stop. This served the dual purpose of keeping records and of impressing upon them the importance of stoppage. When they became more interested we had them mark the causes of the stops. When we had them thinking in terms of how many stops they had to handle during an hour, and not how many looms they ran, we had gone quite a way. Even so, when we let it be known that each weaver would handle 60 looms instead of 24 there were objections.

IT IS unfortunate that the term "stretch-out," with its implication of greater effort on the part of the operative, has been applied to a plan that is merely "labor specialization." Starting with the premise that it is uneconomic to pay a highly skilled employee for work that does not require skill, "labor specialization" re-arranges tasks in such a way that the skilled employee does his, or her, day's work performing only such operations as require skill. Operations that do not require skill are performed by unskilled labor. As an example, under "labor specialization" the weaver, instead of performing all the functions attendant to a loom, performs only the highly skilled weaving operations; filling the battery, cleaning, taking off the rolls, etc., being done by common labor. The operative does not increase effort, but specializes the effort, making possible increased returns for both the operative and management. The accompanying article deals with the technique of applying the plan.

Trial Operation

"Many of the operatives thought that 60 looms would be a back-breaking job, so, when we were about ready to put the plans into effect, we took a man over 70 and a girl who was not a good weaver and had been running only 18 looms under the old system. We gave the man 64 looms and the girl 56 under the new lay-out and set them to work. Then, with their experience to back us, we were ready to talk to the rest of the operatives.

"We have always believed that the average worker knows just about as much as anyone about his job and will grasp anything fair as long as you take pains to talk in language that he, or she, can understand. The average worker is only confused if you talk about percentage of production or various technical points, so when we talked to the weave room force we tried to tell them just what it would mean to them in simple terms. All through the process we stressed the larger pay envelopes possible and brought out the self-interest. First, we put up a chart which showed a clock. The clock face was divided into various colored segments, each segment representing the amount of time the weaver spent each hour in different operations; so many minutes for weaving, so many for filling the battery, so many for cleaning, etc.

"The operatives were greatly interested to see how they spent their time and energy. When they had assimilated this we put up another clock face. This clock had two 25-minute segments marked 'weaving only' and two five-minute segments marked 'rest.' We told them that the weavers were to do an hour's work the same as ever, but they would do weaving only. We also explained that we had put in the rest periods because we knew they would find a regular rest would do them more good than just waiting until they were tired and then sitting down for a time. The looms would run during the rest period and there was a certain amount of flexibility about the plan.

"We told them that we had figured out accurately how many looms they could take care of under the new plan without extra work and again stressed the fact that it was the number of stops and not the number of looms which was important. It had gotten around that the old man and the girl we had tried out on the plan were very pleased and had made more money—a point emphasized—than the others. We were able to put the plan into effect with no friction and without underhanded opposition.

Little Friction

"There were, of course, a few of the operatives who were in opposition even after all our planning. However, their number was just about the number we had to drop under the specialization plan so two difficulties were solved by letting them go. In summing up, I might say that we believe that this matter of carefully preparing the help for changes is well worth the time and effort, and that our theory has been to talk to them in their own language."

A little patience in preparing the groundwork for labor specialization will often save much time and worry later. Once the plan is in successful operation there is only one pitfall. One manufacturer did a fine job in getting the ends down in his spinning room to a figure below that on which specialization had been planned. He reasoned that it should now be possible to have the operatives take care of more spindles. His reasoning was sound, but he ran into difficulties when he tried to put his ideas into operation because he did not thoroughly appreciate all the factors which the engineers had taken into consideration. Experience indicates that there is danger in making changes without engineering as sound as that which developed the original plans.

99% of Power Fed to Cotton Spinning Frame *Is Lost*

By George Wrigley

J. E. Sirrine & Co., Greenville, S. C.

FOR the purpose of intelligently selecting the proper motor size for a frame, it is necessary to know to a reasonable degree of accuracy just what power the frame will need. The word "reasonable" is intentionally used. We are not concerned with a problem requiring an exact answer.

Four-frame motors are standard in sizes of 15, 20, 25, 30, and 40 hp. Individual motors are standard in sizes of 3, 5, 7½, 10, and 15 hp. We want to know which of these sizes to use, and the choice must be based on reliable data.

Some years ago it was customary to predict power requirements from tests made on similar frames, making allowances for differences in speeds, yarn numbers, and ring sizes by judgment. With the substantial changes in frame characteristics and operating conditions resulting from new developments, this method became increasingly unreliable.

Essential Elements

In order to esimate properly the power requirements of a frame, it is now thought best to separate the frame study into its essential power-consuming elements, investigate the laws governing each of these elements, and use the aggregate requirements of the parts for the probable total. This method is here described in detail.

The data for the studies are compiled from a combination of crude laboratory tests on some of the elements and "field" tests on full-sized frames on others. In the laboratory tests, readings were made with a small calibrated motor. In the "field" tests, the ordinary individual motors were generally used, due allowance being made, of course, for the motor losses.

Practically speaking, all the power used in a spinning frame is expended in overcoming friction and is converted into heat. Some of this friction is in lubricants, some between metal surfaces, and some in air. Only an extremely small part of the total goes into the mechine's purposeful function of attenuating and twisting the group of fibers forming the yarn. From this point of view, its losses approximate 99%; and its efficiency, about 1%.

We have probably all heard the statement that motors cause excessive temperatures in spinning rooms. The fact that the motors are sensibly warm to the touch is cited as the cause of this heating. Obviously this is largely a case of clouded thinking and the failure to distinguish between temperature and quantity of heat units. Of the total power input to the spinning room, about 12% is lost in the motors; and about 88%, in the frames. But it all is transformed into heat, and the motors are responsible for only about one-eighth of the total. Any other form of drive would have about the same losses and cause the same heating.

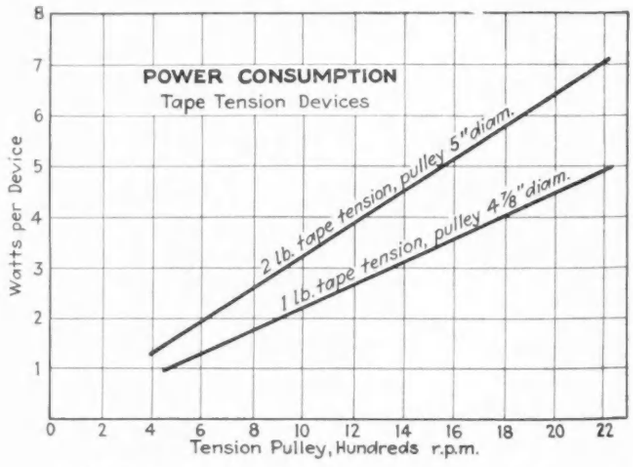
Cylinder, Rolls, Builder, and Tapes

We shall discuss the several power-consuming parts of the frame.

Cylinder. The power to drive the cylinder is expended in overcoming the friction of the several bearings—generally about six for a frame of practical length—and in the friction of the cylinder surface against the air.

In order to secure a power test of a typical cylinder, an ordinary ½-hp. loom motor was fitted with a pulley and arranged to drive the cylinder through a small leather belt. By using several diameters of pulleys on the motor, tests were made at the several corresponding speeds. As was to be expected, the power varied directly with the speed, giving a straight-line curve characteristic of slow and moderate speed friction. At a cylinder speed of 1,000 r.p.m., the 8-in. cylinder of this 256-spindle frame showed a load of 215 watts. This is a small part of the total frame load; and for purposes of estimating, the load of other cylinders may safely be determined by direct allowance for length and diameter.

Rolls and Builder Motion. The same motor was used in making tests as for the cylinder tests, simply adding the rolls and builder motion by connecting up the gearing. For a 256-spindle frame with rolls operating at 120 r.p.m., it was found that 200 watts were consumed. Of course the losses are affected somewhat by the roll weights, condition of lubrication, and other factors; but this figure can be taken as a basis and direct computa-



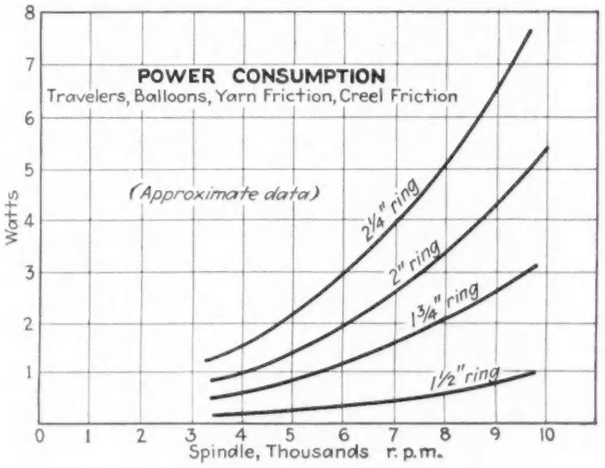
Within the limits of the tests, the power showed a straight-line characteristic, as drawn between speed and watts

tions made for estimating other frames, using direct proportion.

Tape Tension Devices. Tape tensions are essentially idler pulleys on weighted lever arms. Power tests were made with the calibrated motor driving a pair of devices. Readings were made at several speeds and on several types of devices. Tests of a device giving 1 lb. tension and operating at 1,800 r.p.m. showed 4 watts per device. A similar test on a device giving 2 lb. tape tension showed 5.8 watts per device. Within the limits of the tests, the power showed a straight-line characteristic, as drawn between speed and watts.

Power for Spindles

Spindles. When we started these tests, it was with a hope that we could derive a simple formula that could be used for estimating the power of any spindle from the elements of dimensions and speed. Numerous tests showed clearly that this could not be done. For instance, spindles of identical dimensions but different design varied as much as 27% in power consumption.

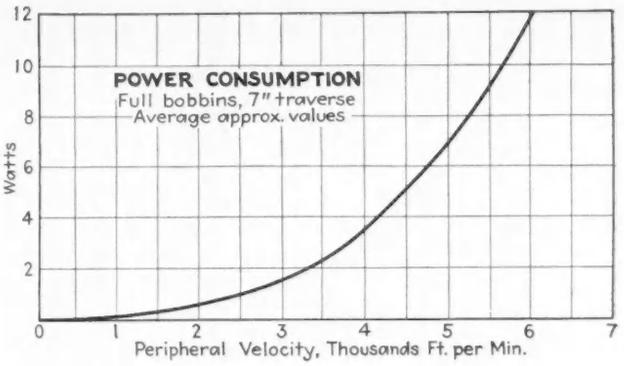


The friction of the traveler on the ring is an elusive thing to measure

For estimating purposes it is desirable to have records of tests from a range of spindle sizes and types, selecting the nearest for comparison. This selection must take in all factors of design, size, speed, lubrication, and tape tension. Tests were made on as many varieties of spindles as could be readily obtained.

Each test was made with the calibrated motor, using several sizes of pulleys to get a full range of speed. Tape tension was adjusted for 1 lb., a full set of readings made, and then another set made at 2 lb. Record curves from these tests were made and can be used for estimating the power for practically any standard spindle under any ordinary condition within the limits of good practice.

As could be expected, the power changes at a greater rate than the speed, and this change is more marked at the higher speeds — the curves beyond



Bobbin load is an important factor, constituting, as it does in some cases a fairly large part of the total frame load and varying through wide limits, depending on the bobbin length, surface speed, and yarn smoothness

11,000 r.p.m. showing rapidly rising characteristics.

The calibrated motor, driving two spindles under test, was found to provide a very handy and rapid method of comparing lubricants in bolsters. Tests were made with several liquids, including distilled water, many well-known spindle oils, and the heavy oil called Mill Cott. Water showed up well at low tape tensions, but the power curve crossed that of the lighter spindle oils when practical tape tensions were applied. There was very little difference between the spindle oils of comparable densities. The Mill Cott showed a very heavy load, not only when starting up cold but even after becoming quite warm from its own friction losses.

To cite some actual figures from tests, of two different spindles one showed 3.6 and the other 8.9 watts at 7,000 r.p.m. The same spindles at 10,000 r.p.m. showed respectively 6.2 and 14 watts; and at 13,000 r.p.m., 10 and 22 watts. The two spindles mentioned are not directly comparable, as they differ very much in size, design, and principle, but the figures indicate the considerable range that may be met.

It has sometimes been thought and stated that the full bobbin requires more power than the empty bobbin on account of the increased weight of yarn being carried by the step bearing at the lower end of the bolster. To clear this point, a brass bobbin was made of slightly greater weight than the full bobbin of yarn but of small diameter and smooth outer surface. Tests showed that this brass weight had very little effect on the power consumed by the spindle, the extra power required with it being of the order of only 1% —providing that the full bobbin load is principally due to air friction, as will be discussed under the subject of bobbins.

Tape Losses. Tape losses are included in the spindle power consumption shown by the record curves. These losses are small, difficult to calculate, and also difficult to separate from the spindle tests or to test directly. Tape losses are due to internal fiber bending, air fric-

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"Practically speaking," declares Mr. Wrigley, "all the power used in a spinning frame is expended in overcoming friction and is converted into heat." Just where these losses occur and how they may be allowed for in choosing the size of motor are explained in the accompanying paper, which Mr. Wrigley recently presented before the Charlotte Engineers' Club, Charlotte, N. C.

tion, and slippage at the cylinder and at the whorl. A comparative test was made between a tape with an ordinary lap joint and one with a diagonally cut butt joint, showing a slight saving in favor of the latter. It would appear that this saving is due to the lessened vibration.

Bobbins. The power consumed by the bobbin package is expended principally in air friction and increases rapidly with increasing surface speeds. Bobbin load is an important factor, constituting as it does in some cases a fairly large part of the total frame load and varying through wide limits depending on the bobbin length, surface speed, and smoothness of the yarn.

Traveler a Problem

Traveler Losses. The friction of the traveler on the ring is the most elusive and difficult thing to measure, and is practically impossible to calculate. Testing by the individual ring method is not accurate, or at least that has been our experience so far. Testing of a complete frame by the differential method is reasonably accurate.

There are so many factors and variables entering into the problem that, even with known data from tests of complete frames, it is difficult to predict what will happen. For instance, a traveler at a certain speed will show a certain power consumption. Raising the speed should theoretically increase the power, the rate of increase being about as the square of the speed, in per cent. However, the increased speed may be just right to make the traveler "float," a condition where the yarn pull is exactly balanced by the centrifugal force of the traveler and balloon. Or, for the same reason, a heavy traveler might show the same loss as a lighter one.

A great deal of additional work is necessary in order to obtain even reasonably accurate figures. In the meantime, we have to use approximations from tests of actual frames, assuming that they represent average good practical conditions. For small ring sizes and light travelers, the loss is small; but for large rings, especially with coarse yarns and heavy travelers, it becomes important.

There are a great many kinds of travelers, varying as they do in weight, design, ring size, etc. Power changes rapidly with speed, and even the intermittent lubrication practiced in some mills helps materially. For large rings and heavy travelers, some form of continuous lubrication would be highly desirable.

Balloons. The balloon loss is caused by the friction of the whirling yarn against the air, and in some cases against the separators. It is variable, depending on the position of the ring rail and to some extent on the fullness of the bobbin. It is much less per spindle for a complete frame than might be expected from individual loops of yarn. In making tests on actual, complete frames, the balloon loss is taken at the same time as the traveler loss and is recorded and used in combination with those records. This applies also to creel friction and friction in thread guides and rods.

Losses in Drives. Drives between the motor and the frame cylinder have losses of the order of 2 to 5%, depending on whether chain, V-belt, or flat belt is used. These losses consist of friction between moving parts of chains, internal fiber friction, and slip or creep in belts, and air friction in all of them. There is also an incremental loss in the bearing of motor and frame due to the pull of the driving member.

Values Checked

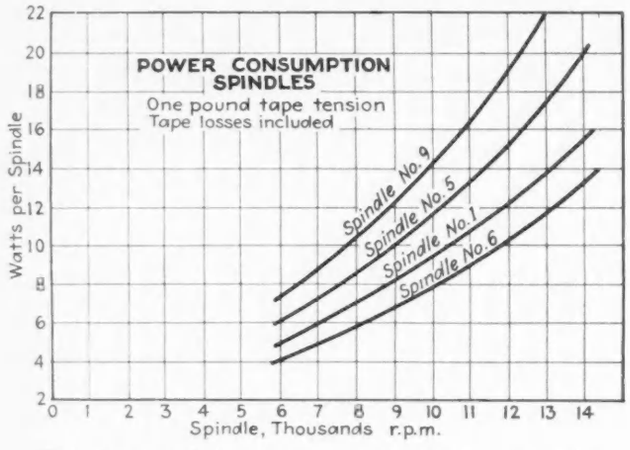
The calibrated motor was obviously tested in the manufacturer's laboratory with a Prory brake load, and this would give a very low pressure on the motor bearings. With the motor driving individual spindles under tests at several values of tape tension, there should be a change in the motor bearing losses and consequently a difference in the motor output for any measured input. In order to check the value of this effect, a duplicate motor was set up, without electrical connections and driven mechanically from the calibrated motor. The effect was found to be very small but must be allowed for in the final records of the corrected values.

Spindle speeds were checked by a modified form of stroboscope consisting of a perforated disk driven by a battery motor and connected to a calibrated tachometer.

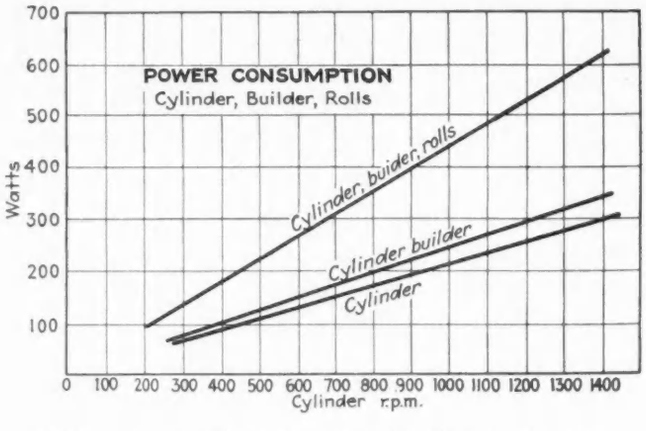
Any ordinary counter or tachometer at 10,000 r.p.m. takes more power than the spindle, causing excessive slip of the tape and indicating speeds far lower than the actual.

Power is an important factor in the cost of mill operation. Generally speaking, a print-cloth mill of 40,000 spindles operating 55 hr. a week will have an indicated load of 1,500 kw., a monthly average consumption of 355,000 kw.-hr., and an annual power bill of $42,000, with power at 1c. per kilowatt-hour.

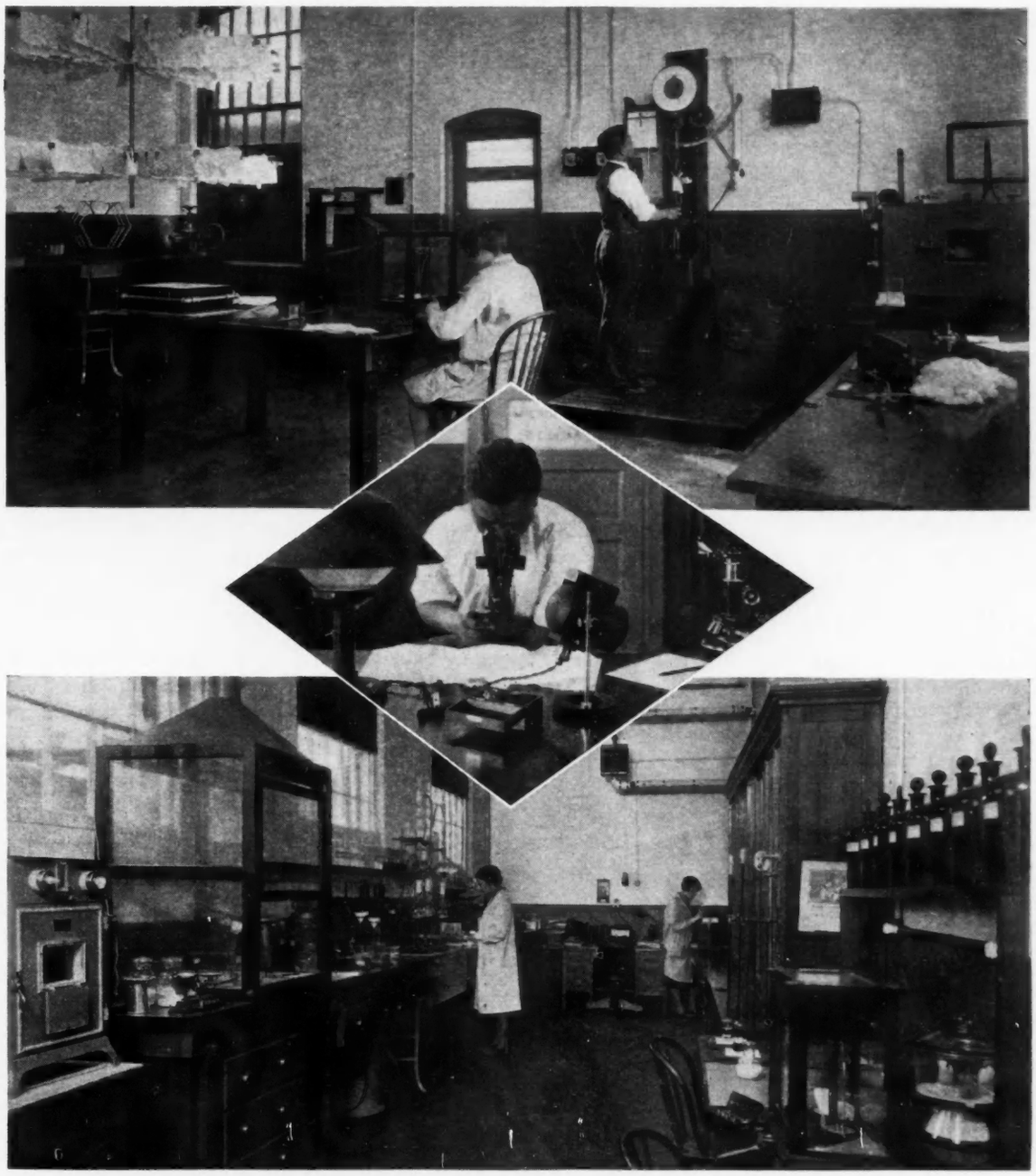
Of this amount about half, or $21,000, is lost in the spinning room. There are about 35,000,000 ring spinning spindles in America; so that, if the above figure is taken as a fair average, the loss of power in spinning frames has a total annual cost of $18,375,000. A practicable reduction of 10% can be safely valued at $1,873,500 a year.



The power changes at a greater rate than the speed, and this change is more marked at the higher speeds



The power varied directly with the speed. The cylinder was tested first, and then the rolls and builder were added



A Mill Research Laboratory

FROM time to time we have emphasized in these columns the need for an organized program of fundamental technical research in the textile industry. However, we have also made it clear that no such program would be effective if there were not adequate laboratories in individual textile mills where the results of fundamental research could be applied to practical manufacturing problems. In fact, even pending the realization of the larger effort, the activities of the mill laboratories are indispensable—and are often the source of vitally important technical information.

Consequently we regard as significant each new addition to the ranks of adequately equipped and properly administered testing and research departments in textile mills.

One such, which has been developed recently, is located at the Danvers Bleachery & Dye Works, Peabody, Mass., controlled by the Naumkeag Steam Cotton Co., Salem, Mass. This laboratory serves both the bleachery and the Naumkeag plant.

The illustrations above show the three major departments: physical, microscopical, and chemical.

Three general classes of work are done: testing, control, and mill research. As Ernest N. Hood, treasurer, pointed out to the writer, it is often difficult to determine where one type stops and the other begins.

At any rate, the primary purpose is to find out just what is happening at all stages in the manufacture and processing of Pequot sheets and pillow cases, and to apply that information, when secured, toward the improvement of the mill technique. Similarly, a close check is kept on the qualities of the plant's output as compared with competitive products. An interesting activity is the arrangement with the Salem Laundry whereby tests, under actual conditions, are possible.

No such laboratory can of course engage in many of the broader phases of fundamental research. It can, however, insure an optimum product; develop many original lines of investigation of mill practices; and apply the results of scientific research made available by colleges, schools and other agencies. As such, it affords to the company assurance that its methods are being kept in line with the most advanced thinking in the industry and in scientific fields.—*Editor.*

Selection of Stock and Processes Governs Handle of Knitted Worsted Fabric

By L. M. Harless

◆ *The fact that resiliency and full handle are desirable properties in a knitted fabric requires that manufacturers insure the retention of these qualities in their yarns. Proper choice of raw stock and careful selection and regulation of the processes to which it is subjected are important in attaining this goal.*

IN SELECTING wools for the knitting trade, it should be remembered that smooth and full-handling stock gives the most desirable results. The wools from English down breeds and their derivatives and from South American sheep are particularly suited to the knitting trade. These must not, however, be considered perfect; for a wool, in order to be perfect, would have to be as fine as gossamer, softer than silk, more resilient than indiarubber, stronger than fine wire, intransmutable as mummy cloth, and as cheap as linters.

The most desirable characteristic of the above-mentioned wools is their resiliency. This feature is due to two basic causes. In the first place the natural curl or crimp of the fibers prevents their lying parallel to each other and allows considerable air space to exist within any group of fibers. In the second place, the fibers are inherently "springy," and their natural tendency is to resist pressure and to occupy a maximum amount of room when free and uncontrolled. These are the features that are desirable in a knitted fabric, the elasticity allowing freedom of movement and complete recovery of shape after stretching, and the nature of the fibers allowing a maximum of warmth with a minimum of weight.

Of the South American wools, the best for full-handling yarns is the Patagonian wool of Puntas Arenas. This wool is very crimpy and in some cases is spirally twisted, stamping it as a splendid fiber for looped fabrics. Montevideo has also gained a reputation for the suitability of its wools for the same purpose. Another source of supply is found in the Australian crossbreds above 46s.

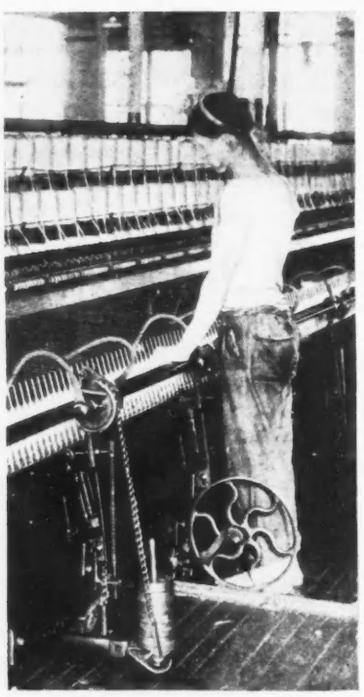
The finest and most popular wool for the knitting trade is undoubtedly the merino. Australian merino has won much favor because of its suitability for dress goods and coatings; and the shorter varieties, known as the short combing wools, are often used for mule-spun yarns. Cape merino is particularly adapted to underwear manufacture, it being soft, white, and free from burrs.

Freedom from burrs is a very desirable feature in any wool which is to be used for undergarments. Those who handle wools realize the difficulty there is in obtaining burr-free wools at the present time. There are, however, certain districts of South Africa that are, as yet, immune from such plants as the trefoil. In Australia the seeds form part of the food of the sheep, and to get rid of these plants would be to starve the sheep.

Bradford-System Yarns

The best knitting yarns are made from short wools —these yarns, by reason of their many protruding fibers and natural looseness, giving the desired full handle. Wools as short as 3 in. in mean length can be processed on the Bradford system and spun into desirable yarns. Experiments recently made at the Bradford Technical College show that, compared with similar material porcupine drawn and mule spun, these Bradford yarns are equal in diameter to the others, and that the much-condemned cap frame produces a yarn suitable for use in the knitting trade. Cap yarns are known to be rough; but is not this whiskery condition desirable for filling up the interstices of the fabric? It is only when cap yarns are given too much twist that they become lean and objectionable.

It is true that while the hosiery manufacturer has a very high standard for yarn uniformity, he shows comparative laxity when it comes to the question of yarn strength. The yarn manufacturer, therefore, does not have to pay as much attention to uniformity of staple in making knitting yarns as in making weaving yarns. While shortness of staple is generally considered a disadvantage in making yarns for the weaving mills, it may actually be an advantage when the product is to be a knitting thread. This fact enables the wool man to find an outlet for his short-staple wools.



Under certain conditions the advantages aof the mule are not obvious

Because of their shortness, wools for the knitting trade are usually carded. When wools of sufficient length for preparing are used, they are also subjected to carding in order to give the subsequent yarn a loftier handle. The writer recommends that more attention be given the carding

process in order that nepless slivers may be produced. It also seems advisable that the combing process be omitted for wools of 50's quality downwards, not only to reduce manufacturing costs but to allow the short fibers to remain in the yarn, thereby imparting to it a loftier handle. At the present time, the only worsted yarns which escape the combing process are carpet yarns; and though to compare carpets with knit goods is odious, there is a real reason for mentioning this very desirable omission.

The suggestion for reducing knitting-yarn costs by modification of existing processes meets with very little response in the industry. Two such suggestions are that backwashing should follow the combing process and not precede it, and that the hot-air type of backwasher be used rather than the multi-cylinder type. The object of such changes is to produce more compact slivers, rovings, and yarns. Though the advantage of this may be recognized, no action is taken, the spinner showing only a quasi-interest in the attainment of ideal knitting yarn.

Backwashing has a very beneficial effect on the material so treated. West Australian and South African wools which are not backwashed often contain an appreciable amount of sand, which quickly has a damaging effect upon the knitting needles. It has often been said that backwashing is an unnecessary operation, and in many cases this is true. For sandy wools, however, this backwashing is very essential.

Despite all that has been said and written regarding the respective merits of the various worsted combs now in use, no person, by inspection of the top, can tell what comb has been used, provided the top has been subjected to two gilling operations. This may lead to the conclusion that any one of the three combs used for medium and fine wools may be employed. (The combs referred to are of course the Heilman, Noble, and square-motion combs.) This conclusion may, however, be based on a wrong hypothesis.

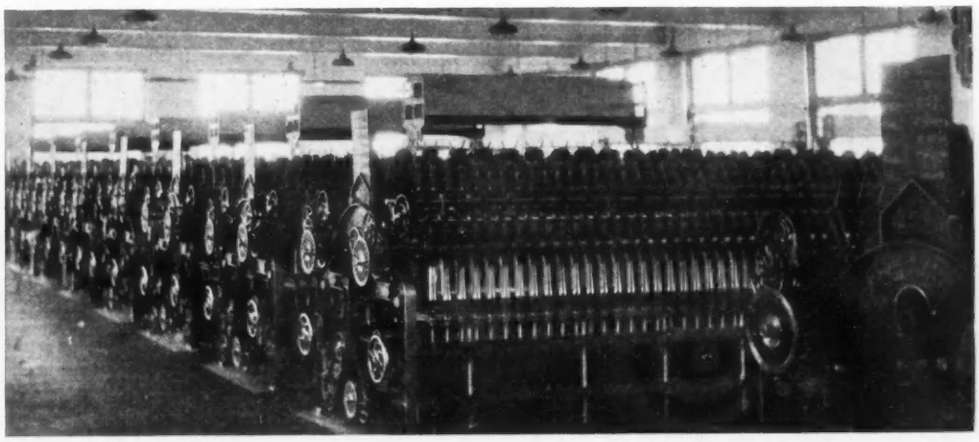
The Heilman, French, or rectilinear comb is well worth a place in the industry for two important reasons: (1) It is the only comb which successfully deals with short wools, and (2) it removes all burrs—and that, in the knitting trade is of interest, especially when thinking of garments to be worn next to the skin.

The square-motion comb effects a more individual arrangement of the fibers and produces an almost nepless top. Combing should not, however, be carried to an extreme, as the result will be a lean, undesirable product. Double-combed tops, for example, are lacking in fullness, although this defect may be partly remedied by inserting less twist in the yarn than in single-combed yarn. Research is now proceeding in regard to the effect of single and double combing on yarn diameter.

The nearer one approaches the spinning frame, the more important the operations become and the greater is their effect on the spun yarn. Of the three systems of drawing—open, cone, and porcupine—the latter is most suitable for short wools. Because of this fact, porcupine drawing is often considered essential to the manufacture of knitting yarns. Open and cone drawing, however, are largely used and have proved eminently satisfactory in processing wools of 4 in. or over. If these systems were listed according to their respective merits, they would appear in the following order: porcupine drawing, cone drawing, and open drawing.

Uniformity and full handle, the two properties most desired in a knitting yarn, are secured, after proper selection of raw stock, largely by careful attention to machine settings. Drawing drafts and twist especially are reduced to a minimum; and these changes, together with the alterations made in blending, produce rovings from which desirable knitting yarns can be spun.

The spinning frame cannot be left out of consideration for it is here that the material may be made or marred for knitting purposes. The uniformity of the yarn is largely dependent on the treatment which the material receives during this operation. What has been said with regard to making a full, round, and uniform strand in the drawing is applicable here. Spinners making heavy yarns on the cap frame may reduce the speed of the tubes to about 5,000 r.p.m., and the yarn will then be comparable to that spun on the mule. This reduction means that the yarn receives less beating against the air.



Cap-spun yarns are not of necessity lean and wiry

From the point of view of the spinner, the respective value of cap, flyer, ring, and mule yarns is largely a question of speed and production. As far as the knitter is concerned, price and degree of smoothness, are the governing factors. Certain materials are flyer spun as a matter of course. Mohair and luster wools, for example, being wanted for smooth-faced cloths, receive this treatment. Other materials are flyer-spun because the material, being loose and lacking in coherence, would fare badly in cap spinning. Cap tubes can be run at 7,000 r.p.m., flyer spindles at 3,000; hence cap yarns can be made at a cheaper rate than flyer yarns. The material often governs the type of frame to be used. However, many wools, say from 40 to 50's, can be spun either on the cap or flyer frame; and at this point the ultimate use of the yarn should be considered. The cap yarn can be offered cheaper than the flyer yarn, and it is then that the hosiery manufacturer dictates to the spinner his requirements by buying one rather than the other.

The knitting trade makes use of both yarns, but preference is given to the cap yarn because of its cheapness. Buyers would like the flyer-spun yarn at the cap-yarn prices, but this is hardly possible. To meet the man who can go half way, ring-spun yarns are offered; and

these, if well spun, are better than cap and slightly inferior to flyer yarns.

Mule yarns have a good reputation among knitting-yarn users; but unless the material used is of the right type and allows the mule to display its splendid control of short fibers, the advantage in using the mule is not very obvious. When normal-length wools are used on both systems, it is quite impossible to distinguish between a cap- and a mule-spun yarn. The value of the mule lies in its ability to dea with short, cheap, and waste wools, from which full-handling yarns are made.

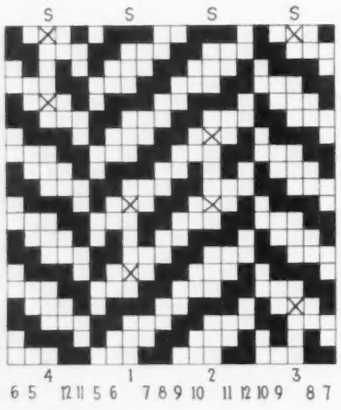
The "after-spinning" processes of twisting, doubling, and fancy twisting are important to the knitting industry because of the many ply yarns that are employed for looped fabrics. What constitutes the right amount of ply twist is the most debatable point in this connection, but yarn buyers would rather judge from appearance.

Almost all yarn sent from the spinner to the knitter passes through the winding operation; and though this is considered the least skillful of all processes, yet faults of considerable magnitude may be developed here. On the other hand, winding may be considered as a very beneficial operation if it is given proper attention. It provides an excellent opportunity for the removal of slubs, knots and vegetable matter.

The difficulties encountered in winding are due to bad knots, cones with crossed ends, varying tensions, rubbing, and irregular distribution of moisture. Winding machines are now much better adapted for their work than was formerly the case, though methods of tensioning which roughen the yarn surface, and traverses which roll the yarn, still exist. Winding machines must be simple and should allow the yarn to pass freely forward from bobbin to cone without any disturbance.

The worsted spinner is often equipped for the making of novelty or fancy yarns, which may be used by the knitter. In many cases, however, the use of such yarns presents considerable difficulty. If care is taken in the selection and use of novelty yarns, nevertheless, very desirable fabrics may be produced. Among the many good novelty yarns which can be used by knitters is that known as the spiral, which is made by twisting together yarns of different counts or of varying lengths.

Core yarns might also be used to advantage, and their relative cheapness should be an inducement to knitters. Although nub yarns give a pleasing appearance to some fabrics, it must be remembered that there is an excellent chance of the nubs being rubbed off during the knitting operation. Sizing the yarn, however, may assist materially in retaining the nubs.



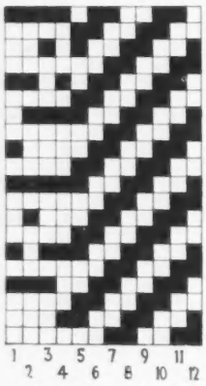


Fig. 2. Ground structure and design showing how the stripe is inserted

Silk Stripe Lends Smartness *to Suiting Fabric*

By Hartley Beaumont

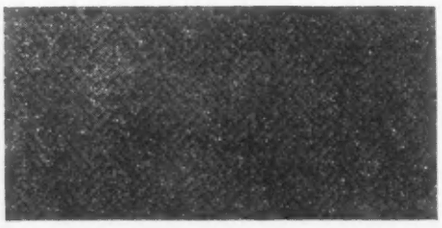


Fig. 1. Silk and wool mixture suiting fabric

ANALYSIS:

Warp

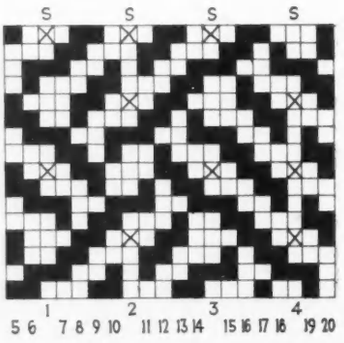
2/30 Blue mixture 2 2 4 3840 ends 72 yd. 32.91 lb.
60/2 Blue silk 1 1 960 ends 72 yd. 1.37 lb.

Filling

62 picks....2/30 Blue mixture $\frac{62 \times 68 \times 64}{15 \times 560} = \frac{32.10 \text{ lb.}}{66.38 \text{ lb.}}$ $\frac{66.36 \times 16}{64} = 16.59$ oz./yd.

Reed.....14 × 5 = 70 in. reed width = 68.57 in. gray

Finished sample—15.3 oz. per yd.



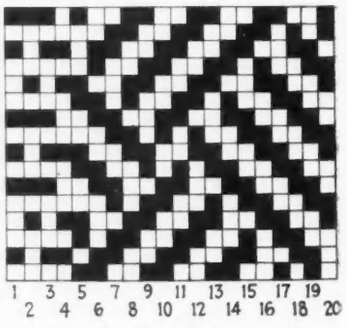


Fig. 3. Optional ground construction

CONSTANT demand for conservative, but not entirely plain, fabrics for men's suitings taxes the ingenuity of the designer for the creation of new and attractive fabric constructions. Now and then a suggestion such as the following is welcomed by the designer as a basis for the creation of some original effects.

Illustrated in Fig. 1 is a fabric coming under the heading of silk mixture. A departure from the absolutely plain effect is obtained by the insertion of a silk stripe having a brighter hue than that of the ground fabric. The blending of the stripe with the ground yarns eliminates any suggestion of boldness, and the resultant fabric should appeal to conservatively dressed men.

Fig. 2 illustrates the design for the ground weave and shows the method of inserting the stripe. An optional design, giving the same effect, is pictured at Fig. 3.

Failure to Know Costs Called

Textile Industry's Worst Error

By A. W. Williams

THE superintendent of a large cotton mill stated recently that in his opinion, the worst single error of the textile industry is the failure of many mills to know their costs. After discussing with me the value of balance sheets, prepared at least every three months, this manufacturer said:

"I can not see for the life of me how any mill can go along with a statement once a year, or once each six months, and hope to know where it is, or what it is doing. Costs in the mill can increase without its being realized. A lot of things can happen, other than the market fluctuating, cancellation of orders, or lost profits and lost money in lost accounts.

"Of course a big mill is more or less of an intricate problem, but it has just that much more need of figures which will tell you just what the mill is doing.

Cost Accounting Neglected

"One of the great troubles of the textile industry lies in the fact that a good many old mills for many years have gone along in a slip shod sort of way, but have managed to make some money year in and year out. In recent years with increased spindles, stiffer competition, and changed conditions, it hasn't been so easy to make money. Many have lost it. In some cases, additional money has had to be put into the business.

"Other business concerns know what they are doing, not quarterly, but monthly; and some can even give you figures on operations closer than that.

"Cotton mills deal in big quantities, frequently on low margins, where close and accurate figuring is essential. They may pay high salaries to officials and salesmen, but still they will skimp in the matter of accountants or cost engineers whose business it is to tell them what they are doing.

"Imagine a business that has $20,000 worth of cotton in its warehouse, really on consignment, but invoiced as stock in taking off the inventory; and not a scratch of a pen to show it as a debit on the other side of the ledger—merely an invoice ticket hanging on a file and not entered. That's a lot of money to forget about, as a bill due to the cotton factor from whom it was purchased. Yet this has actually happened. If I sold $20,000 worth of cotton I'd know it, and I'd expect the buyer's books to show it, in the event he had a fire, failed, was washed out by flood, or what not.

"I really believe that many mills have the poorest office systems to be found in any line of business that may be named. As a rule they are under-manned, and one or two people are trying to do the work that several are needed for. Another man will be added quickly enough to the mechanical force, or any department that may need him. Production gets anything it needs. But start arguing for increased cost of non-productive labor, and you immediately start a free-for-all fight in the organization.

"No business is stronger than its balance sheet. A business that appears to be operated profitably, but is always hard pressed to pay its bills is either under-financed or losing money. Credits, cost finding, and general accounting are the three allied items of cost that are small for what they return the manufacturer. At least, these departments can prove, if ably operated, that it is better to take off the night shift, or close down entirely when conditions are bad, rather than to go on running at a loss.

"I've been charged with being an old woman, an old fogey, and a lot of other things, because I held out for records of what was being done in mills with which I was connected. However, check back and you will find that the most successful mills are the ones which have a real cost system and which know what they are doing. One of the most prosperous mills in the South, and one that has made money, spends a good deal of money to enable its officials to know the cost of production. When it closes down its plant it isn't guessing; it knows. I've seen mills in operation at a time when they could buy manufactured merchandise at less than it was costing them to produce it, and thereby make a profit, instead of showing a loss.

Better Outlook

"When mills really know their costs and what they are doing, the textile industry will be a much better one to be in than it is today. A lot of textile men know where their faults lie, but they close their eyes to them, and go along kidding themselves, their associates, and their competitors. A better outlook faces the trade today because it is awakening."

Use of Chemical Equipment Minimizes

Corrosion

in Textile Mills

By Percy C. Kingsbury

THE textile industry is one of the largest consumers of chemical products, and in view of the improvements made in recent years in chemical equipment, the equipment used for handling the corrosive materials used in bleaching, dyeing, and finishing in some of the older mills is rather surprising to the industrial chemist. There are, however, many progressive textile mills, often of small capacity, where the work being done is recognized as essentially a chemical operation and is carried out under the technical control of a chemist or chemical engineer who is responsible for the specification of the material-handling equipment used in the plant. In these plants, by keeping in touch with new developments and improvements in the general chemical field and by selecting proper materials of construction, it has been possible to prevent costly repairs and replacements, safeguard the quality of the goods, reduce the hazard to personnel and property, and often make considerable saving in initial cost of plant and equipment.

Most of the corrosive materials used in the textile industry; for example, chlorine, sodium hypochlorite, muriatic acid, tin tetrachloride, acetic acid, hydrogen peroxide, aluminum chloride, etc., are manufactured in stoneware. This is a dense, thoroughly vitrified clay product, usually covered with an attractive brown glaze, although a special white stoneware is also available. Both the glaze and the body are completely resistant to the action of all of the chemical products used in the textile industry. The advantages of this resistance to chemical action are that the initial cost is the only expense, no repairs or replacements are necessary, there is no spoilage of goods due to stains from metallic salts, and no impairment of the processing liquids, this being of particular importance in the case of peroxide.

Advantages of Stoneware

In the textile mill, stoneware has a number of special advantages.

On account of the glazed surface it can be kept perfectly clean. It is non-absorbent, mechanically strong, and less expensive than most other materials of construction not having these advantages.

Stoneware is formed in the plastic state and then fired at a high temperature to insure thorough vitrification. This process of manufacture makes it possible to fabricate almost any type of factory equipment in stoneware, and shapes to special design can be made up to order at little or no extra expense.

A considerable part of the acid-proof stoneware equipment supplied regularly to the chemical industry, such as storage tanks, valves, piping, pumps, acid eggs, and other devices for handling corrosive liquids, is being used to equal advantage by the textile industry. In nearly all the important rayon mills in this country and in Europe, the processing liquids are stored in stoneware containers and distributed by stoneware pumps and pipe lines. A detailed description of the stoneware equipment installed for this purpose at the plant of the American Enka Corp., Asheville, N. C., consisting of large stoneware storage vessels and stoneware centrifugal pumps and accessories, was published recently (Kingsbury, P. C., Corrosion Problems in the Rayon Industry, *Ind. & Eng. Chem.*, Vol. 22, p. 130, Feb. 1930).

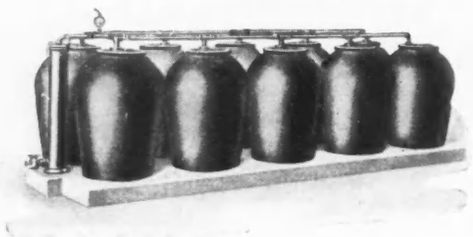


Fig. 1. Battery of stoneware vessels used for storage of corrosive solutions

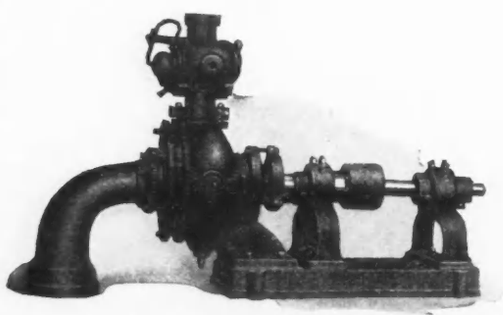


Fig. 2. Centrifugal pump

A survey which has just been completed by A. C. Nielsen Co., Chicago, Ill., of stoneware equipment furnished seven years ago to the Dedham Finishing Co. of Dedham, Mass., may be of even more interest to the textile industry. At this plant stoneware equipment was installed in 1924 to replace brass which had previously been employed for handling sodium hypochlorite and sulfuric acid in the bleaching of cotton goods. In the Nielsen report it is shown that the annual saving in the use of stoneware equipment over that previously employed gives an annual return of 59% on the investment.

New Developments

In addition to the regular line of equipment for industrial chemical purposes available to the textile industry, a comparatively recent development is the production of acid-proof equipment designed specifically for the textile

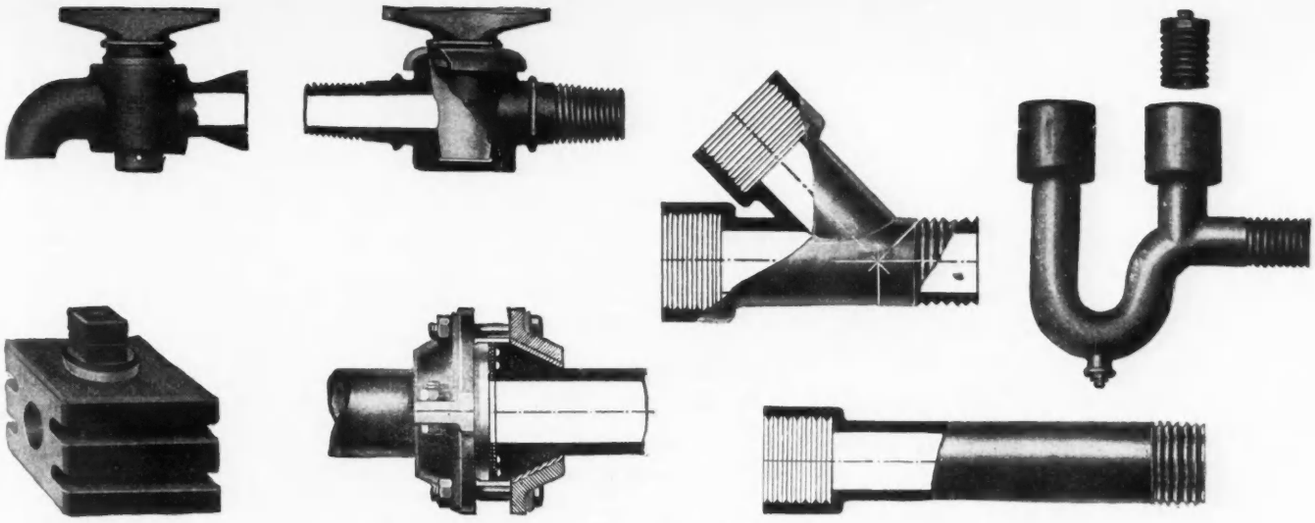


Fig. 3. Pipe lines, plug valves, and other accessories

mill. This material, when made up into large shapes, is designed to withstand the rapid changes in temperature to which processing equipment is often subjected in a textile mill.

Some of the types of ceramic equipment most widely used in the industry are shown in the accompanying illustrations. The equipment which is used in many of the rayon plants in this country for storing corrosive processing solutions, and which is gradually being adopted by other textile mills, is illustrated in Fig. 1. It consists of a number of individual stoneware vessels connected together by stoneware siphons in such a way that the set operates, in all essential respects, as one large tank. The capacity of each of these vessels is usually 525 gal., although sets with larger and smaller vessels are also in service.

Use of this type of storage equipment makes it possible for the mill to receive such materials as sodium hypochlorite, acetic acid, peroxide of hydrogen, muriatic, and sulfuric acids in tank-car lots. The consequent saving in freight alone will often pay for the equipment in a comparatively short time; and there are the further advantages of the elimination of loss, nuisance, hazard and expense due to carboy handling.

Fig. 5. Vessel for dispensing bleaching solutions

Stoneware pumps for filling and discharging tank cars and for distributing solutions of any nature whatsoever around the plant are shown in Fig. 2. These pumps are available in different types and sizes, varying in capacity from 6 to 600 gal. per min. Stoneware pipe lines, plug valves, and other accessories for use with these pumps are shown in Fig. 3, and various shapes of stoneware containers for use around the plant are illustrated in Fig. 4. These vessels are made with or without bottom outlet and can be fitted with stoneware spigots if desired. They are made in capacities from 1 gal. or less up to 1,000 gal. or more. Fig. 5 shows a stoneware vessel used for the dispensing of bleaching liquor. Rolls made of hard stoneware mounted on a steel shaft are shown in Fig. 6. These rolls can, if desired, be machined to exact dimensions and polished to a fine smooth surface.

Most of the shapes described above are now available in the special stoneware mentioned previously, where severe temperature conditions are to be met. For the preparation of solutions requiring the injection of live steam into the liquid, these vessels give excellent service and for many purposes may be used to good advantage in the textile industry.

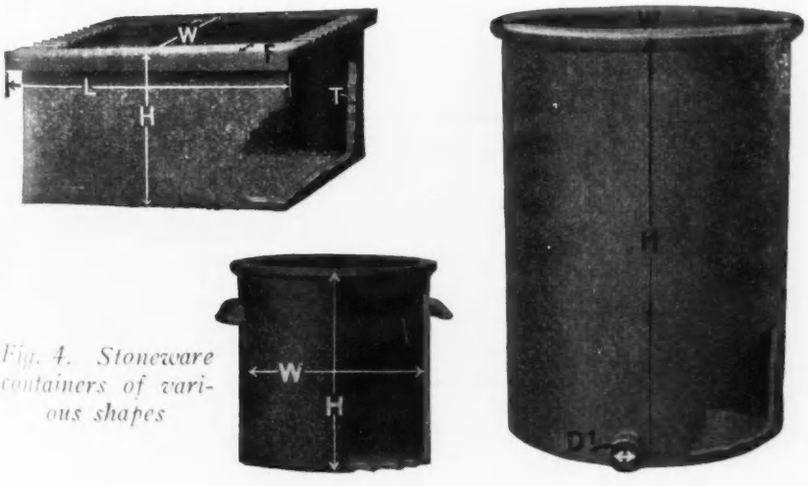


Fig. 4. Stoneware containers of various shapes

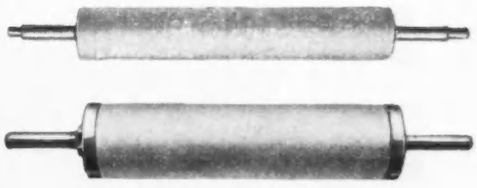


Fig. 6. Rolls of hard stoneware mounted on steel shafts

Consumers' Research Answers Cheney's Criticism *of Its Silk Advice*

IN A letter to The Consumers' Research, Inc., New York, published in our issue of Aug. 1, page 42, Frank D. Cheney, of Cheney Bros., South Manchester, Conn., took exception to statements in "Handbook of Buying," published by the research organization. In the following letter F. J. Schlink, technical director of Consumers' Research, Inc., answers Mr. Cheney's criticisms:

Editor, TEXTILE WORLD:

Mr. Cheney, in writing you his letter recently, did not, in my view, give sufficient consideration to the lack both of definite information in the trade and of definite methods for the safeguarding of the interests of the ultimate consumer of silk piece goods and garments. Our letter in reply to Mr. Cheney's communication stated that his views with respect to water-spotting are quite contrary to opinions given us by textile experts representing the consumer's point of view, of whom one or two have done more research in this field than all but one or two of the silk manufacturers themselves.

Pure-Dye Silk

Mr. Cheney stated in his letter that "'pure-dye silk' is and always has been understood to mean that the silk contains no metallic weighting whatever." We pointed out in our reply that the industry itself does not, despite Mr. Cheney's opinion, agree on the positive description which he gave for "unweighted or pure-dye silk." The Silk Association in fact, in response to an inquiry, was itself willing to define it only in terms set forth by "one of the leading dyers."

A leading college teacher in textiles reports that silks *ordered to be manufactured* and delivered as pure dye by a group of women who wished them for the purposes of study actually contained, on delivery, weighting about equal to the amount of gum lost in dyeing. Matthews, this person notes, says that silk which has been weighted to replace the gum which has been removed in boiling is not considered as really weighted at all. The teacher in question understands further that actually in the trade the term "pure-dye silk" refers to silk which has weighting equivalent to or not to exceed in amount the weight of the gum present in the raw silk, and points out further an unfortunate feature in this situation in that, since the amount of gum in different silks varies, the term "pure-dye silk" does not even indicate a fixed amount of weighting.

One of our subscribers reports a case in which silk was bought from one of the leading department stores as pure-dye silk and, when weighting was found in it, the store's executives informed her that pure-dye silk was not free from weighting and she should have ordered pure-dye silk free from weighting; that is, pure pure-dye silk.

"Unweighted silk" ordered by a subscriber to Consumers' Research was found upon test in the laboratory to contain weighting to the extent indicated in our *Handbook of Buying*.

Professor Mack and Miss Cooke, at Pennsylvania State College, report an actual case of unquestionable authenticity in which, in 50 purchases, 23 clerks stated positively that the fabrics contained no weighting; whereas, actually, all but three of the 50 samples bought contained mineral weighting. Of the others, one was composed of 100% rayon; while all but two of the 47 were silk to the extent of one-half or less and tin-phosphate weighting to the extent of one-half or more.

Finally, the *Ohio Agricultural Experiment Station Bimonthly Bulletin*, No. 174, "The Influence of Laundering and Exposure to Light Upon Some Washable Silks," as abstracted in the August, 1931, *Journal of Home Economics*, reports findings that *"all the pure-dye silks* showed some weighting." (Italics ours.)

You would also find an interesting reference in "Summary of the Silk Weighting Controversy," issued by the American Home Economics Association to its members, Sept. 10, 1929. We have several other citations from literature of the trade bearing directly and specifically on the point at issue, too numerous to cite in this letter.

Labels and Stores

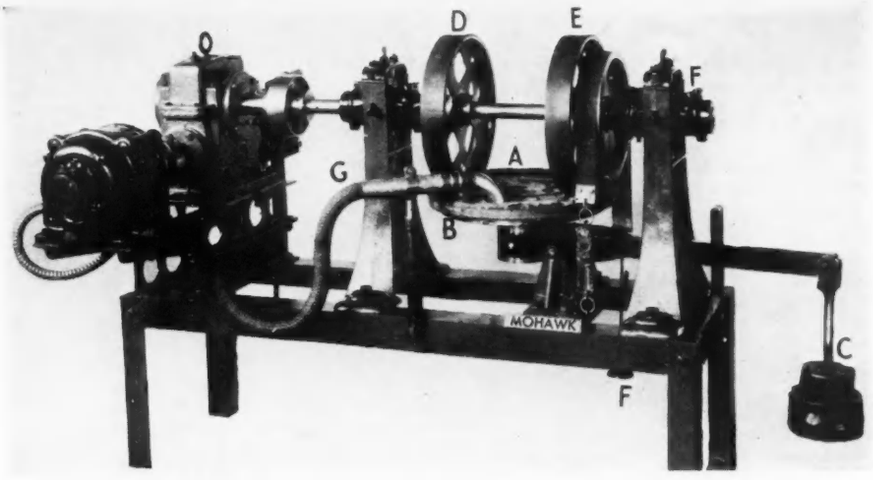
With reference to later paragraphs of Mr. Cheney's letter, if some assurance as to quality of fabrics can be obtained by a reading of labels, we feel fully justified in pointing this out to subscribers. It is not fair to represent our statement as meaning that goods not so labeled never are and never can be pure dye. The New York stores were listed for the benefit of our subscribers who happen to have access to these stores by mail or in person. Admittedly an exceedingly imperfect method of providing sources of supply of pure silk, but it happens that manufacturers perhaps are not aware that most consumers have no idea of how to reach the manufacturer's plant or selling agent. If this point needs revision in our handbook, it is clearly in the direction of reducing the number of stores which are known to supply silks which are unequivocally free from weighting, since silks without weighting are not often supplied when pure-dye silk is requested—a point made unmistakably clear in the case studies made and published by Professor Mack of Pennsylvania State College and Mrs. Winning of New York University.

It is the industry's own fault if the indefiniteness of the claims which it holds out to consumers, the confusing factors which it permits retailers to introduce through lack of definite factory labeling of goods, and finally failure of the Federal Trade Commission to act in prevention of unfair competition—presumably because nearly all of the firms follow the same practices—require the ultimate consumer to apply a great deal of caution in making her purchases, and if even then she can be in no way sure of getting what she wants or has paid for.

Very truly yours,

F. J. SCHLINK.

While recognizing that the term "pure-dye silk" is often employed to imply a weighting equivalent to the gum removed, we believe that the best interests of the industry and consumer would be served if it were always applied only to materials entirely free from metallic weighting, the term "par-weighted" being used where the weighting merely replaces the gum removed.—*Editor.*



Wear testing machine. Under controlled conditions and with scientific interpretation of results this device yields valuable information as to the wearing qualities of floor coverings.

Scientific Control Requisite in Testing Wearing Qualities of

Woven Floor Covering

By A. G. Ashcroft

Mohawk Carpet Mills, Amsterdam, N. Y.

IN THE floor-covering industries an increased interest in the technical investigation of values in carpets and rugs has given rise to considerable work on the measurement of the wearing qualities of carpets. To assist in these studies, a number of testing methods and devices have been developed. While there is no doubt that careful testing has resulted in improved products in many lines, it is not unusual that the publicity afforded a new testing machine or method gives rise to over-emphasis on tests carried out under pseudo-scientific conditions. It is highly important, therefore, that in all artificial testing, the conditions be carefully controlled and the results scientifically evaluated.

At the Mohawk Carpet Mills this phase of product development has received considerable attention during the last two years. Wear of carpets and rugs has been carefully studied, and several methods of testing tried. One machine sold commercially for this purpose was purchased. This machine early demonstrated its inaccuracy and is entirely unsatisfactory for comparative wear testing even in the hands of technicians.

During the last year experiments conducted on a machine along the lines of one developed by the U. S. Bureau of Standards have been more successful. This wear-testing machine embodies scientific principles of wear-testing floor coverings. However, unless operated under carefully controlled conditions where accurate measuring and experienced evaluation of its results are possible, it too, becomes an artificial test.

The principles on which this wear testing machine operates are simple. Wear on carpets consists of the successive attacks of a leather surface on the pile, with the application of pressure, pushing, sliding, and twisting forces operating in all directions intermittently and repetitively. Actual wear of floor coverings is not merely a scraping or friction rubbing of the surface, but twist is also an important wearing force. The result is first a depression or crushing of the pile, and then a more gradual breaking off of the ends of the yarn and a disintegration of the small fibers, eventually uncovering the back.

The wear-test machine illustrated performs these wear functions in the following manner: The carpet to be tested *A* is fastened firmly to a wooden turntable *B*. This turntable is freely moveable. By means of the lever action of the weight *C* it exerts a pressure upward against the two leather-covered wheels *D* and *E* equal to the average pressure of the human foot. In this way the actual pressure on the carpet is maintained constant at all times.

The wheel *D* is fixed to the shaft and is driven by the motor and reduction gears at a speed of 80 r.p.m. This wheel in turn drives the carpet on the turntable. Therefore it exerts on the carpet an intermittent pressure of about the area of the human foot with also a drive or push on the surface yarn; and as the wheel revolves, this drive and pressure is exerted in all directions of the weave .

The other wheel *E* is not fixed to the shaft, but is turned by the friction of the carpet upon its leather surface. Its freedom is, however, restricted by a leather brake *F* held in position by a weight and a spring scale. This brake resists the turning of the wheel and thus causes it to partly slide over the carpet. The resulting action is one of pressure, slide, and twist intermittently over the circle in all directions of the weave. The action of the vacuum nozzle *G* in removing surplus worn yarn aids in maintaining uniform conditions.

Evaluation of Results

One of the greatest difficulties in wear testing is measurement and evaluation of the results. Special measuring devices are used to obtain the depression caused by the wearing wheels. These measurements are made at regular intervals during the test. They give a rate of wear which, when combined with known constants, determines the wear-life of the carpet for comparative purposes.

While we feel that the machine illustrated and described deserves further investigation and study by suitably equipped laboratories, manned by experienced technicians on woven floor coverings, its use—or the use of any wear-testing device—for occasional testing by the trade is considered impractical and is sure to lead to unsatisfactory comparisons.

Men's Swimsuit Sales Hit By Vogue for "Trunks Only"

THE tendency of men bathers to discard the upper half of the conventional suit and wear trunks only has become so manifest during the season now closing as to cause considerable concern in the bathing-suit industry. This vogue has hurt the sale of two-piece bathing-suits in several parts of the country, especially at private beaches on the Pacific Coast, and the knitters now are speculating as to what may be awaiting them next summer. The issue is considered of real importance and is the subject of a special bulletin sent out this week by the National Knitted Outerwear Association through Ellery B. Gordon, executive secretary.

Mr. Gordon reviews the various remedial measures suggested by the trade, such as "an appeal to decency," etc., and says such moves are not likely to be successful. Instead, he proposes the creation of a new style for men—a beach jacket which would be worn when promenading in mixed company and which could be handily discarded when entering the water. He concludes his article by soliciting opinions from the trade on the subject.

Mr. Gordon writes:

No matter how lightly we may treat the idea of the unbeautiful male disporting himself in trunks only, it is a serious fact that the practice is spreading, and that there is every possibility of its spreading too far. We do not mean that he will discard anything more, but that too many will discard the shirt.

It has been suggested and seriously considered that an appeal to decency be made, and that it be made in an organized way as a deliberate campaign, with the purpose of discouraging the practice either by ordinance or force of public opinion. This might be the proper way to proceed. I have talked with several bathing suit manufacturers and with several merchandisers. These men are divided in their opinion. I have received sufficient confirmation of my own opinion, however, that a special bulletin has been issued to the membership.

It is my opinion that any attempt to head off a definite vogue is purely a waste of time and money. In the first place, I believe this particular vogue started with the desire for freedom in action and not from a desire to display physical charms. The average male is fully as modest as the ladies—even admitting that he may have in some instances any particular charms to display.

The best way to handle and direct a style trend is to fall in line with it. As a matter of fact, it cannot be handled in any other way.

It is my personal opinion that bathing suit manufacturers have sufficient creative ability to design and effectively market a completely new bathing and beach costume for men. If men are tired of the shirt and trunk idea, whether one piece or two, and wish to be free from everything but trunks while in the water, it is obvious that the manufacturers of swimming costumes should take another tack.

Is there any good reason why a beach jacket of completely new design, for the explicit purpose of wear on the beach or while out of the water cannot be provided for these males who object to wearing an upper garment while in the water? I don't believe that any man wishes to appear around the beach, while out of the water, so severely unclothed. I don't believe that it would be a difficult job to sell a new attractive beach suit for men, including an upper garment which they could easily slip off before going into the water and easily slip on when they come out.

▸ Dr. Taylor Addresses N. C. Full-Fashioned Group

Dr. George W. Taylor, hosiery statistician, University of Pennsylvania, was the honor guest at the summer convention of the North Carolina Full-Fashioned Hosiery Manufacturers Association, held at the Green Park Hotel, Blowing Rock, N. C., Sept. 4 and 5. Dr. Taylor spoke on "Intelligent Competition" and stressed the importance of statistics as guides in the determination of business policies.

Principal business conducted at the meeting was the election of the executive committee, as follows: C. W. Gaddy, Albemarle, N. C., chairman; J. E. Millis, High Point, N. C.; A. R. Hoover, Concord, N. C.; William Nebel, Charlotte, N. C.; R. O. Huffman, Morganton, N. C.; J. H. McEwen, Burlington, N. C.; and G. W. Hundley, Durham, N. C. Morirs Price, Greensboro, N. C., was re-elected secretary of the association for the ensuing year.

▸ New Cotton-Covered Elastic Shoe Lace

A contribution to the simplification of life's daily duties is reported by C. K. Everett in charge of the New Uses Section of the Cotton-Textile Institute. This is a cotton covered elastic shoe-lace, which is put in the shoe, adjusted to the comfort of the wearer, and by an ingenious fastening "stays put." There is no bow to tie or untie, or loose shoe-lace to trip on. It has already been adopted as "standard factory equipment" in a line of women's shoes sold by one of the prominent shoe chains. It is adaptable for both men's and women's oxfords, and also to middy blouses, gob trousers, football pants, and other laced wearables.

S.T.A. Fall Program

The fall program of the Southern Textile Association, recently announced by Walter C. Taylor, Charlotte, N. C., secretary, includes the following meetings:

Eastern Carolina Division, Roanoke Rapids, N. C., Oct. 2.

S.T.A., semi-annual meeting, Charlotte, N. C., Oct. 9 to 10. (Evening of Oct. 9 and morning of Oct. 10.)

Master Mechanics Section, Gastonia, N. C., Oct. 16.

Weavers' Section, Greenville, S. C., Nov. 13.

Spinners Section (South Carolina), Nov. 20. (Place to be announced later.)

Programs and other detailed information on these meetings will be published at a later date.

▸ Raw Silk Imports Show 20.5% Increase

Raw silk imports during the first eight months of 1931 were 20.5% higher than during the same period of 1930, the Silk Association of America, Inc., reports. Deliveries to mills showed an increase of 9.5% while stocks at warehouses on Aug. 31 were 41,878 bales compared with 44,978 bales on Aug. 31, 1930. Imports of raw silk during August were 58,411 bales as compared with 37,315 bales during the previous month and 51,147 bales during August 1930. Deliveries to mills during August were 46,454 bales as compared with 44,746 bales during the previous month and 41,734 bales during August 1930.

▸ Cotton-Textile Institute Accents Tweed Effects

Tweed effects, velveteens and some distinctive new prints lend significance to the fall 1931 swatch book which the Cotton Textile Institute has just issued. The Institute has mailed about 16,000 of the booklets to representative garment manufacturers, retail buyers, stylists, and consumer group leaders. The plaid influence shows in several colorful fabrics of a Scottish suggestion. The velveteens stress deep brown and bottle green. The print novelties are especially gay, blue and pale green outstanding. One black, white and gray floral vine design is high lighted for informal frocks and tailored dresses. Solid colors are shown in broadcloths and shantungs.

▸ Design Registrations Jump 300% in Year

More than 1,400 textile designs for use on spring season fabrics were registered during August with the Textile Design Registration Bureau, affiliated with the Design Protection Association, an increase of 300% over August, 1930. The August registration exceeded any month since the design bureau was organized three years ago, and is considered significant indication of the general reaction against design piracy which prevails throughout the market.

▸ Nine New Winter Color Announced

Nine new colors for winter have just been sent out to members of the Textile Color Card Association in confidential swatch form, it is announced by Mar-

garet Hayden Rorke, managing director. The 1931-2 winter color card showing these shades will be issued shortly. Smart reds are significant among the new colors. Bagdad Red is a rich terra cotta tone, while Brique, a darker shade, is a new version of rust red. There are two outstanding interpretations of green. Persian Lime, and Hollywood Green. Brown, which retains all of its style significance, is represented in Sultana Brown, a rich, deep shade with a suggestion of mauve. Paris Beige, slightly rose-tinted, is a smart complement to brown, as well as a contrasting note with black, green, red or rust.

▸ District Sales Offices Established by Textiles, Inc.

District sales offices have been established by Textiles-Incorporated Sales Co., Gastonia, N. C., in the following cities:

New York, N. Y., in charge of H. A. Florsheim, sales manager, 225 Fifth Ave.; Philadelphia, Pa., in charge of A. W. Latta, sales manager, 308 Chestnut St.; Boston, Mass., H. D. Skinner, manager, 212 Summer St.; Chicago, Ill., George T. Hutchinson, manager, Fabrics Building; Chattanooga, Tenn., J. Cheston Woodall, manager, 524 James Bldg.; and Greensboro, N. C., H. M. Boshamer, manager, Jefferson Standard Bldg.

Textiles-Incorporated Sales Co., as announced several months ago, is a wholly owned subsidiary of Textiles, Inc., organized to handle the sale of the parent company's gray yarn output and the mercerized, dyed and finished yarn production of Hampton Textiles, Inc. Executives offices of Textiles-Incorporated Sales Co., of which J. H. Separk is president and Arthur K. Winget, secretary-treasurer, have been transferred from the First National Bank Building to the Armstrong Building, located on West Airline Ave., in Gastonia.

▸ Improved Facilities for New York Office of Textiles, Inc.

H. A. Florsheim, vice-president and sales manager of Textiles-Incorporated Sales Co., has installed a Tele-type machine which gives his office in New York more rapid communication with the executive offices of the mills (Textiles, Inc. and Hampton Textiles, Inc.) at Gastonia, N. C., whose yarns are sold through the above sales company. Additional office space has been leased by the sales company at its present address, 225 Fifth Avenue, New York.

▸ Violin Bow String Newest Bemberg Yarn Outlet

Patents have been issued on a violin bow which is strung with Bemberg yarn instead of horsehair, it is announced by R. A. Kratochwill, of Greeneville, Tenn., inventor of the new bow.

Mr. Kratochwill, who is also a musician, conceived the idea of stringing bows with Bemberg, he says, following research work in Chinese music. Previous attempts had been made to find a substitute for horsehair, he discovered, by one Wu Fong in 1675 who had experimented with silk, but had abandoned the idea "for many reasons" including the high cost of silk.

The bow as perfected employs either single or 2 to 3-ply 150 denier yarn, which is twisted and then treated with a solution to give it the necessary abrasive resistance and durability. According to Mr. Kratochwill, who believes his invention has tremendous possibilities from the musician's point of view, the new bow strings have all the advantages of horsehair without the disadvantages of the natural fiber. He makes the following comments:

"Horsehair quickly becomes brittle and will then break easily. This is not true of the synthetic fiber. The minute protuberances on horsehair necessitate constant application of resin. This shortens the life of the strings. Because of the smoother surface of the synthetic fiber resin is necessary only occasionally. The man-made fiber is said by musicians who have tried the new bow to give a sweeter tone. The synthetic fiber is more durable than horsehair, and finally it is much less expensive."

Jack Card Sees "Peep-Hole" Coming in Silk Mills

Editor, TEXTILE WORLD:

If Paterson really does adopt the proposed plan for licensing silk mills, aimed to eliminate so-called "family shops" in which violations of labor laws are said to exist, I suppose we'll have outlaw plants where employees and salesmen will be forced to withstand scrutiny through a speak-easy "peep-hole." Cost systems, if any, will have to be revised to include the item of "protection."

Altogether, it looks like another fine racket in the offing. I hope the Racketeers Institute is watching its supply-demand balance carefully. We can't afford to have this thriving young American industry menaced by the modern curse of over-production.

JACK CARD.

Anti-Cotton Planting Legislation Is Hanging Fire in Several Southern States

THE restriction of cotton production in 1932 is the object of State legislation proposed and being considered in several southern States. Governor Long, of Louisiana, leading advocate of a "cotton moratorium" for next year, who succeeded in having the general assembly of his State pass a bill that will prohibit the planting of cotton in 1932 if other States representating 75 per cent of the 1930 production take similar action, continues his vigorous efforts to have this plan adopted in Texas, South Carolina, Georgia, Arkansas and North Carolina.

Governor Ross Sterling, of Texas, called the legislature of that State into special session which convened Tuesday. The cotton growing interests of Texas are faced with the important problem of working out their salvation, and, as the Lone Star State produced 29 per cent of the total American crop ginned last year, legislative accomplishments at Austin will be watched with keen interest in cotton circles throughout the world.

In South Carolina it appeared that Governor Blackwood would call a special "cotton relief" session of the legislature to meet about Sept. 15 or shortly thereafter. Considerable agitation for the Long plan has been in progress in Georgia for at least two weeks and the chances of getting through legislative measures to prohibit cotton cultivation in 1932 in that State are growing brighter. Alabama, Mississippi and Tennessee have shown no response to Governor Long's proposal.

There is little difference of opinion on the obvious fact that cotton production must be curtailed in 1932 if the farmers are to receive anything like a fair price for the staple. However, there are any number of opinions as to how this objective can be attained. Some hold that legislative barriers will not solve the problem, that a cotton moratorium in the United States will have the effect of stimulating production in other countries, and that the only sane course is to allow natural economic laws bring about an acreage reduction. This group insists that the low price at which this year's crop will be sold should automatically discourage planting next year.

Those opposed to the cotton moratorium point out that if States producing 75 per cent of the American crop should prohibit cotton cultivation in 1932, the remaining States might increase their acreage to the limit in an effort to capitalize on anticipated higher market prices. Furthermore, they insist that the practical difficulties of enforcing a law prohibiting cotton cultivation leave considerable doubt that the act would prove effective.

After all is said and done, the planting of cotton will be a problem for the individual farmer, many authorities believe, and, if he believes that total acreage will be reduced, his selfish inclination will be to plant more cotton himself and thus "beat the game." The net result of acreage reduction propaganda, unless supported by adequate machinery for prohibiting cotton planting, naturally would increase rather than decrease the year's crop.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Publicity for Bad Work

Editor, Overseers' Round-Table:

These times demand publicity to obtain the finest quality and perfection in all manufactured goods. The superintendent and overseers should cooperate to avoid spoiled work which is the source of seconds, a great loss to the mill. The bulletin would do justice to all concerned as it would not be posted until the positive cause of inferior work had been obtained, for example:

Fault: Too many mispicks and ends out.

Cause: Traced back to the spinning room as very poor or faulty yarn.

This would obtain justice for the weaver. The bulletin board in the spinning room would show cause for the fault in that department. The postings in each department would reveal the first or true cause.

Let superintendent and overseers with the help of all employees do all they can by the use of the bulletin board and all other means to make the careless man a worthy and efficient workman. J. R.

Editor, Overseers' Round-Table:

I THINK BILL is right about the bad effects of bulletin boards for notices about spoiled work, and I had a lot of experience with them not so long ago. Our overseer of carding was advanced to superintendent and as soon as he could he had bulletin boards placed at both ends of the plant on each floor and in every department. But the funny thing about it was that the carding department was always perfect and I know that every overseer in the plant had shown up card-room imperfections several times. As Bill says these bulletin board reports are all bunk and no benefit to the company. W. D. CRAWFORD.

Editor, Overseers' Round-Table:

EVERY TEXTILE mill desires to reduce the amount of "seconds" that it seems impossible to eliminate. To do this, bad work, which causes "seconds," must be abolished.

Tact is required to control any people, especially textile people. When the overseer's faults are exposed to the critical world, he realizes that people are going to criticise him and make slurring remarks about his inefficiency. This would lead him to believe that all people regard him as an outright failure; therefore he would become discouraged and lose interest in his work. An indifferent overseer will lead the laborers under him to do bad work. In short, the whole department would develope an inferiority complex; thereby promoting inefficiency, discontent and bad work. We readily see that this method of eliminating bad work is dangerous.

On the other hand, when an overseer is responsible and the superintendent tells him privately how to correct such maladjustments as cause bad work, it inspires the overseer to eliminate bad work, gives him greater confidence in himself and promotes a more friendly relation.

And What About Un

"TEX has a wild gleam in his eye," Superintendent Chase observed as the overseers settled down for their meeting, "so I suppose that he has something he wants us to talk over. How about it, Tex?"

"I don't know about the wild gleam," Tex came back, "but I was thinking about something. I see lately where some cotton mills have equipped—or maybe have seen that the workers were equipped—with uniforms, and I have been wondering about it."

"You don't need to wonder," Bill jumped in. "Last April, when we were discussing book mergers I predicted that someone would want us in pretty uniforms before long; and here it is. Now, just to be a broad-minded sort of a bird, every textile worker wears some sort of textiles as clothing—unless they run around in bear skins, and I see very little of that—and thus consumes a product of the textile industry. If I am in the cotton branch I may want the workers to wear cotton; if I'm in the wool industry I may want them to wear wool; if I'm in the silk branch I may want them to wear silk; if I'm in the rayon industry I want rayon; and if I'm in the knit goods business I may swear about the bare-leg fad, but, when you get right down to it, we're all in the textile business, and the textile business is such that one branch affects the other. There are a great many things which make us dependent upon what the other branch is doing, and I can't see any lasting good in promoting cotton uniforms, or silk uniforms, or any other kind of uniform. As far as uniforms themselves are concerned, well, during the war I thought it would be swell to be in a uniform—that is until I got in one. Any sort of uniform makes you feel, and makes others treat you, as though you weren't an individual. I don't think that uniforms will do the whole textile industry any good, and I'm against the principle of uniforms because it tends to make you all pieces of a machine instead of individuals. And can you imagine me, or some of the old-timers, in a sweet uniform?"

"I think," said Pete, "that you are wrong on a couple of points. In the first place you, very broad-mindedly, say that one textile fiber doesn't compete with another in the long run. I'll admit that

Uniforms?

the long run problem of the textile industry is to compete with other industries and to get the dollars that go to automobiles, or radios, or something else. But, in the meantime, there is bound to be competition among the fibers and I think that it is wise for any cotton manufacturer, or wool manufacturer, or silk manufacturer, or rayon manufacturer, or linen manufacturer, to boost his own product. Quite outside of that, however, I think that this idea of uniforms for workers will lead to more consumption of textile fibers of all kinds. You take a girl or a man who is not in uniform; they can get away with most any kind of attire and nobody thinks anything about it, but you put the whole gang in a uniform of one sort or another there is competition immediately and no worker dares appear in a shabby uniform. As soon as a uniform gets ornery looking it is thrown away; thus leading to more consumption."

"To get around to the second point," Pete continued, "I think that the principle of uniforms is good. Through competition you take more pride in your appearance; you feel pretty proud of yourself and you have that feeling of the whole crowd working as a unit. I was in the war, too, and I felt good when my shoes were shined better than the other fellows, or my rifle cleaner; even though it cost me good time or money."

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Do *you* think that textile workers should wear uniforms?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

Apparently there is no great danger in the latter plan, so we must conclude that it is not advisable to post notices on bulletin boards telling about bad work.

ONE SEEKING TO PROMOTE GOOD WORK.

Editor, Overseers' Round-Table:

I THINK Bill was right when he said, "absolutely not" and that he would get fighting mad.

If the superintendent knows his business thoroughly he is more than likely to know from what department the bad work is coming. He should send for the overseer of the department, have a heart-to-heart talk with him, and give him to understand that the bad work must stop.

But this pasting it up on a bulletin board, as though a circus were coming to town, and making the overseer a laughing stock among the help and fellow overseers, is a poor way of getting better work. Suppose that while this notice was on the bulletin board one or more of the directors should visit the plant and stop and read it. This would make a bad impression on the overseer and his help, while the director might think that his men in charge had a weak and costly way of dealing with such matters. I know that I should.

H.R.

Editor, Overseers' Round-Table:

There is no capable overseer who produces bad work through carelessness. No matter how careful an overseer may be, he is bound to get poor results once in a while. Any conscientious overseer feels badly enough when poor work crops up in his department, and it is not going to help matters any to tell every Tom, Dick and Harry that a certain overseer pulled a boner.

In every mill I have ever worked in there were always a few dumbbells who took great delight in finding fault with the overseer, and this posting idea would furnish them with so much entertainment that they would even neglect their work. The superintendent should be the one to call the overseer on faulty work and he should do it in private.

FRANCIS J. MCNEICE, Overseer of Dyeing.

Editor, Overseers' Round-Table:

ADMITTING THAT everything human is liable to err, I fail to see the need, or benefit, of making departmental mistakes public property.

This in no way mitigates the evil nor, does it assist in fostering a spirit of cooperation. Unless the mistake was one of wilful intent (in which case summary dismissal would be justified), a private reprimand tends to be more effective than methods of publicity. The latter irreparably damages the morale of the party or parties involved, which eventually reflects itself adversely in subsequent operations.

If publicity is desired; let it be in the form of a monthly bulletin, reviewing the errors and their causes of the preceding four weeks, along with the measures adopted to overcome their repetition, without resorting to personalities. In this way, the publication would become a valuable asset instead of a discouraging liability.

Let us benefit by other's faults rather than assume an attitude of absolute infallibility.

R. A. C. SCOTT.

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Summary of Discussion on Publicity for Bad Work

The question of whether it would be well to post notices on the bulletin boards telling the amount of bad work produced, and the cause, brought forth a lively discussion. Stating that the plan would cause a lot of bad feeling and that the overseer of the department in which bad work was produced felt badly enough as it was, 57% of the contributions voted against publicity. The minority of 43% believed that publicity was one of the most powerful weapons to combat carelessness and that notices on the bulletin boards were fair to all and an incentive to better work. One letter suggested that publicity should be given to bad work but no names mentioned, while another suggested a trial of several months as the best solution.

NEWS about MEN

Gustav Oberlaender, secretary and treasurer of Berkshire Knitting Mills, Reading, Pa., **Henry K. Janssen,** vice-president of the same company, and **George D. Horst,** of Nolde & Horst, hosiery manufacturers, also of Reading, returned Sept. 5 on the "Bremen." Mr. Oberlaender, while in Germany, received the Leibniz gold honor medal for furthering German science, had an interview with Chancellor Bruening, and visited the former Kaiser at Doorn. Mr. Janssen, after a hurried business trip to Berlin and Hamburg, took a five weeks' cure at Bad-Nauheim and met the Oberlaender party, with Mrs. Janssen and his daughter Helen, for the trip home. Mr. Horst's visit to Germany was purely a business trip.

John E. Edgerton, president of the Lebanon (Tenn.) Woolen Mills and president of the National Association of Manufacturers, was the principal speaker at the tenth annual banquet of the Louisiana Manufacturers' Association, when he discussed the present economic situation and trends.

Henry Ford has negotiations under way for the purchase of what is believed to be the first silk mill in America, a small wooden shack on Hanks' Hill, Mansfield, Conn. It is now owned by Mrs. Ezra G. Hanks, widow of the last descendent of Rodney Hanks, who built the mill in 1810.

Stuart W. Cramer, president of Cramerton (N. C.) Mills, Inc., is a member of the Committee on Continuity of business and employment of the Chamber of Commerce of the United States. The final report of the committee will be completed at a meeting in New York on Sept. 21. The report will be submitted to the chamber's board of directors which will meet in Washington on Oct. 2 and 3. Mr. Cramer has also been appointed North Carolina representative on the National Unemployment Committee which is headed by Walter S. Gifford of A. T. & T.

Ferdinand Thun, president of the Berkshire Knitting Mills, Reading, Pa., and also president of the Carl Schurz Memorial Foundation, Philadelphia, is one of the honorary vice-presidents for the National Saengerbund's 28th annual festival at Atlantic City, N. J., Sept. 12 and 13.

Eugene Kreglinger, junior partner in the wool firm of G. & C. Kreglinger, Antwerp and London, is on his way to the wool auctions in Australia and New Zealand and recently stopped briefly in Boston and Montreal. He does not believe that there is any burdensome wool surplus and he sees in a trend toward greater use of wool, particularly in women's dress, the basis for greater demand.

Arthur Land, former secretary of the Alexander Smith & Sons Carpet Co., Yonkers, N. Y., severed his connection with the company on Aug. 21, after an association of 41 years. He has been succeeded by **William F. Cochran Ewing,** whose grandfather, William F. Cochran, was the first secretary of the company. Mr. Ewing's brother, **Thomas Ewing, Jr.,** is president. Mr. Land has not made definite plans for the future.

Stuart W. Cramer, who is a member of several national committees on unemployment

Hiram T. Nones, American trade commissioner, who has spent the last four years in a study of world markets for American goods, arrived in Charlotte on Sept. 10 for conferences with manufacturers of the two Carolinas, who are interested in extending markets for their products.

Richard Lennihan, treasurer of the Hamilton Woolen Co., Southbridge, Mass., chairman of the building committee, formally turned over the keys of the new Harrington Memorial Hospital in Southbridge at the dedication on Labor Day.

L. F. Stockton, general manager of the Warrensburg (N. Y.) Woolen Co., has been elected president of the Board of Education in Warrensburg.

Mrs. Charles Amsterdam, recently connected with Widder Bros., New York, crepe silks, in the capacity of advertising manager, returned last week after an extensive trip through Europe. While gone she secured for Widder Bros. a collection of the latest Persian colors being featured abroad. These shades will be dyed in all their new cloths, and will be ready for distribution shortly.

Prof. Gilbert R. Merrill of Lowell (Mass.) Textile Institute has left for Atlanta, Ga., whence he will work North, stopping at Greenville, Spartanburg, Gastonia, and Charlotte. He will study cotton growing and cotton manufacture.

L. W. Burdette, electrical engineer with J. E. Sirrine & Co., Greenville, S. C., recently was awarded the first prize of $250 in the N.E.L.A. competition for the best exterior lighting of a commercial building. His entry was the flood-lighting of the new Coco-Cola bottling plant in Greenville.

W. S. Griffin is now superintendent of the Alpine Cotton Mills, Morganton, N. C., having been promoted to this position.

W. E. Evans has accepted the position of superintendent of the Irene Mills, Gaffney, S. C. He was formerly connected with the Arkwright (S. C.) Mills.

Sam T. Anderson, foreman of the wool carding department in the Draper-American Mill, Spray, N. C., one of a group of mills belonging to Carolina Cotton & Woolen Mills Co., was last week promoted to assistant superintendent for the Draper-American and Wearwell Sheeting Mills. **G. C. Truslow** is superintendent of these two plants. Mr. Anderson will also take over the presidency of the Carolina Cooperative Council this month, an organization of over 300 key men in the plants of the Carolina Cotton & Woolen Mills Co., for 1931-32. Succeeding Mr. Anderson as overseer of the wool carding department is **L. L. Belton,** who had been night overseer in the same department. **Will R. Jones** becomes the new night foreman, and **S. J. Harvey** succeeds Mr. Jones as second hand.

Albert H. Grimshaw, associate professor of textile chemistry and dyeing at the N. C. State Textile School, Raleigh, N. C., has spent the summer in New England visiting dyeing, finishing and mercerizing plants, and assembling data which will be used in his courses in the coming school year.

John W. Lasell of the Whitin Machine Works, Whitinsville, Mass., participated in the amateur pilots' national handicap aerial derby from Rockville Center, L. I., to Cleveland, Sept. 3 and 4. He was accompanied by Murray W. Keeler son of Lawrence M. Keeler, agent for the works.

Floyd M. Day, superintendent of the Packard Mills, Inc., Webster, Mass., won the Governors' cup tournament of the Webster-Dudley Golf Club.

P. C. Newman, technical expert connected with the Charlotte office of the du Pont company spoke before the Charlotte Engineers Club, at a luncheon

meeting recently. His talk covered the advancement of the American dyestuffs manufacturing industry; he traced its history and explained briefly each of the seven classes of dyes. Points were emphasized by demonstrations. **E. A. Terrell,** manufacturer of textile devices, president of the club, presided.

W. S. Porcher, Charlotte, N. C., representative of the Whitin Machine Works, who was severely injured about ten days ago when his car overturned near Rutherfordton, N. C., has been removed from the hospital at Rutherfordton to a sanatorium at Charlotte for further convalescence.

William Jasmin, formerly with the Hamden (Conn.) branch of the American Mills Co., has accepted the position of overseer of weaving at the Rochdale (Mass.) Mills of the American Woolen Co., succeeding **Edwin R. Toope,** who resigned.

Thomas Hederman, Portland, Me., has taken a position as night overseer of dyeing with the Charlton Woolen Co., Charlton City, Mass.

O. R. Johnson, formerly with the Dunean Mills, Greenville, S. C., has charge of the weaving at the Brookside Mills, Knoxville, Tenn.

D. M. Talley is now overseer of the cloth room at the Sanford (N. C.) Cotton Mills and **M. N. Smith** has been promoted from second hand to overseer of weaving.

Hiram T. Nones, who has returned from a four year study of foreign markets for American products

Millard Moore has recently been promoted from second hand to overseer of carding at the Sanford (N. C.) Cotton Mills, Sanford, N. C.

Alfred E. Stafford, one of the loom experts of the Draper Corp., Hopedale, Mass., and Mrs. Stafford, have moved to Somerset, Mass., where they have built a new home.

Thomas Shiel, Fitchburg, Mass., has gone to the Assawaga Co., Inc., Dayville, Conn., as loomfixer.

Fred Harding, loomfixer at the Caryville (Mass.) Mills of the Taft Woolen Co., has resigned to accept a similar position with the Assawaga Co., Inc., Dayville, Conn.

Horatio G. West of Smith Mills, Inc., Worcester, Mass., has accepted the position of day loomfixer at the Charlton Woolen Co., Charlton City, Mass.

J. W. Roberts is now overseer of weaving at the Angle Silk Mills, Rocky Mount, Va.

Edwin R. Toop has resigned his position as overseer of weaving at the Rochdale (Mass.) Mills of the American Woolen Co.

George West has returned to his former position as loomfixer at the Fabyan Woolen Co., Medway, Mass.

Charles Cornell, Jewett City, Conn., has succeeded **Robert Bethel** as overseer of the cloth room of the Wauregan (Conn.) Co.

Obituary

John Crowther

John Crowther, president and treasurer of the Shannock Narrow Fabric Co., Pawtucket, R. I., a pioneer in the manufacturing of narrow fabrics in the Blackstone valley, died in the Homeopathic Hospital Co., Providence, Aug. 26, after a brief illness. He was 64 years old. Mr. Crowther had been associated with the textile industry in Pawtucket for 38 years. He was born in Media, Pa., in 1866, son of Benjamin Crowther, manager of a cotton mill in Upland, Pa. He studied at Philadelphia Textile School, from which he was graduated in 1893. In the same year he came to Pawtucket and was a designer for the Hope Webbing Co. for seven years. He then organized the Shannock Narrow Fabric Co. with the assistance of Albert Turner and Cyrus Davison. Mr. Crowther is survived by his widow, Mrs. Minnie Mellor Crowther; a son, Franklin Shields Crowther and a sister, Sophia A. Crowther. He was a member of Union Lodge, F. and A. M.; Pawtucket Rotary Club, Pawtucket Chamber of Commerce and Pawtucket Business Men's Association.

James A. Adams

James A. Adams, superintendent of Tupelo (Miss.) Cotton Mills and formerly superintendent of the Springstein Mills, Chester, S. C., died in Tupelo Aug. 25. Funeral was held at Rock Hill, S. C.

Louis Sayles

Louis Sayles, for years master mechanic for the Assawaga Co., Inc., Dayville, Conn., died at his home in that town on Aug. 22, aged 60 years. He was born in Dayville and lived there all his life. He was a member of the masonic fraternity and other organizations.

Thomas H. Smith

Thomas H. Smith, aged 90, former cotton mill operator in Jamestown, N. Y., died at his home there on Sept. 6. Mr. Smith opened the plant of the Jamestown Cotton Co. in 1880 and operated it continuously until he retired from active business in 1918. A son, Henry Smith, is president of the Art Metal Construction Co., and the Marlin-Rockwell Corp.

Emmanuel E. Toman

Emmanuel E. Toman, mill supplies, Allentown, Pa., died on Sept. 5 at the age of 50 years. He was born in New York, and went to Allentown from Paterson, N. J., 30 years ago, to engage in the reed and harness business. He was connected with Allentown Reed & Harness Co., later with Royal Reed & Harness Co., and recently his own business, Toman & Schmidt.

Textile Calendar

Carolina Yarn Association, Second Annual Golf Tournament and Banquet, Sedgefield Inn and Country Club; Greensboro, N. C., Sept. 18 and 19, 1931.

Textile Operating Executives of Georgia, Fall Meeting, Georgia School of Technology, Atlanta, Ga., Sept. 25, 1931.

Southern Textile Association, Eastern Carolina Division, Fall Meeting, Roanoke Rapids, N. C., Oct. 2, 1931.

Textile Division, American Society of Mechanical Engineers, and Providence Section of the Society, Joint Meeting, Providence, R. I., Oct. 6, 1931.

National Association of Cotton Manufacturers, Annual Meeting, Providence-Biltmore Hotel, Providence, R. I., Oct. 7 and 8, 1931.

Southern Textile Association, Semi-Annual Meeting, Hotel Charlotte, Charlotte, N. C., Oct. 9 and 10, 1931.

Southern Textile Association, Master Mechanics Section, Fall Meeting, Gastonia, N. C., Oct. 16, 1931.

Southern Textile Association, Weavers' Section, Fall Meeting, Greenville, S. C., Nov. 13, 1931.

Silk Industry Week, Paterson, N. J., Nov. 14 to 21, 1931, including Silk Machinery Exposition, Nov. 14 to 21; National Silk Convention, Nov. 18 and 19; Paterson Silk Institute, Nov. 14.

Southern Textile Association, Spinners' Section (South Carolina), Fall Meeting, Nov. 20, 1931. (Place to be announced later.)

American Association of Textile Chemists and Colorists, Annual Meeting, Boston, Mass., Dec. 4 and 5, 1931.

Knitting Arts Exhibition, 28th Annual Show, Commercial Museum, Philadelphia, April 11 to 15, 1932.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932.

NEWS about MILLS

Cotton

Cowikee Mills, Union Springs, Ala., have had their picking equipment changed to single process machines made by the H & B American Machine Co.

American Thread Co., Willimantic, Conn., has awarded a contract to raze three old stone mill buildings of the original Willimantic Thread Co., built about 100 years ago.

Conanicut Mills, of the **Massachusetts Thread Mills, Inc.,** Fall River, Mass., were transferred under superior court decree Aug. 24. Jacob Friedburg and Leo Dane, new owners, plan to open a yarn mill with James Harrison as superintendent. Contracts are reported on hand to give several months' work to about 200 workers.

Aponaug Mfg. Co., Starkville, Miss., (J. W. Sanders Cotton Mill, Inc., No. 2) has awarded a contract to Charles Bell & Son, for the construction of a 90-ft. addition to the present plant.

***International Lace Co.,** Gouverneur, N. Y., is reported to be negotiating with a number of prospective purchasers relative to the sale of its idle mill property.

Cannon Mills Co., Concord, N. C. Briggs-Shaffner Co., Winston-Salem, N. C., is installing a Hyatt roller-bearing 3-compartment desizing machine in mill No. 9.

Locke Cotton Mills, Concord, N. C., have discontinued their weaving department and are now producing hosiery yarns.

***Threads, Inc.,** Gastonia, N. C., recently reported in these columns as having been chartered with authorized capital stock of $250,000, have purchased the thread yarn department formerly owned and operated by Arkray Mills, Inc., Gastonia. Officers of Threads, Inc., who were elected recently, are as follows: J. Gottlieb, president; G. B. Mason, vice-president; and M. E. Hayes, secretary-treasurer. Mr. Gottlieb has announced that new thread finishing equipment already purchased will increase the capacity of the plant about 200%. George R. Tennant, of Gastonia, has been awarded contract for the erection of an addition to the present building which will be 175 ft. x 75 ft., with steel frame and sash.

Linn Mills Co., Landis, N. C., is overhauling its spinning and fly frames with the Guillet system, which is supplied by the Dixie Spindle & Flyer Co., Charlotte, N. C.

***Clyde Fabrics, Inc.,** Newton, N. C., which was organized recently, were the successful bidders for the properties of **Clyde Mills, Inc.,** of that place, in a mortgage foreclosure sale conducted by James McClamroch, special master in chancery, on Aug. 31. The bid was for $55,000, plus assumption of leins on machinery in the plants, which were understood to amount to approximately $120,000. The foreclosure sale was authorized by a decree handed down by the U. S. district court at Greensboro, N. C., under a bill in equity in action entitled: "The Marine Midland Trust Co. of New York, trustee, vs. Clyde Mills, Inc."

Grier Cotton Mills, North Wilkesboro, N. C., which have been operated only on part-time this year, have started up on full-time with prospects for a good business this fall.

Cleveland Cloth Mills Co., Shelby, N. C., expects to add 75 operatives to its force and start three 8-hr. shifts. This move would involve a payroll increase of $1,500 a week.

Social Mill, of the **Manville Jenckes Co.,** Woonsocket, R. I., which at one time had the largest weave shed under one roof in the world, but which has been closed for several years now, may be torn down so that the company, now in receivership, may save taxes it is obliged to pay on the idle property. Much of the machinery was removed from the mill long ago, and it was offered for sale or lease, but no customers have been found.

Pacific Mills, Lyman, S. C., have placed a contract with the Gallivan Construction Co., Greenville, S. C., for the erection of an addition to the bleachery building, two stories and basement, measuring approximately 100 ft. x 100 ft. Bids will be received at the Spartanburg (S. C.) office of Lockwood Greene Engineers, Inc., on Sept. 12, for the construction of a three-story addition to the warehouse building, 300 ft. x 100 ft. As previously announced, eight printing machines and complementary equipment will be added to the Lyman plant which will increase the weekly finishing capacity by about 1,000,000 yds.

Ware Shoals (S. C.) Mfg. Co. has ordered 340 tons of structural steel from the Virginia Bridge & Iron Co., Roanoke, Va.

Borden Mills, Inc., Kingsport, Tenn., have resumed night operations at their plant following a suspension of night work for several months. This gives employment to about 500 men.

Cherokee Spinning Co., Knoxville, Tenn., is maintaining a full-time operating schedule at the present.

Wool

North Berwick (Me.) Co. has awarded contracts for alterations to cost $12,000. A. T. Spaulding is superintendent of the mill.

Selden Worsted Mills, Methuen, Mass. This plant is now employing about 200 workers on day and night shifts. The mill is said to be running on a government order that will carry the work through into January.

Elmvale Worsted Co., Pittsfield, Mass., has formed the **Elmvale Dye Works,** a subsidiary to carry on the dyehouse work of the company. A storage building is being remodeled for the purpose and about 15 additional operatives will be employed.

Ohio Carpet Co., West Warren, Mass., has closed its plant for an indefinite period on account of labor trouble arising from a 15% reduction in wages. About 150 employees are affected.

West Coast Woolen Mills, Ltd., Vancouver, B. C., Canada, are now employing 30 workers in the production of tweed suitings, overcoatings, bannockburn cloth, blankets and woolen suitings. One year ago the plant was taken over from the British Columbia government.

Knit

Bear Brand Hosiery Mills, Kankakee, Ill., are now having four new single process pickers, fitted with Ramsdell automatic self doffing calenders, installed by the H & B American Machine Co.

***Millville (N. J.) Hosiery Co.,** recently organized with a capital of $150,000, to operate a local hosiery mill, has engaged Norman Hulme, to prepare plans for a proposed plant, reported to cost close to $50,000, with equipment. The architect is in charge of the project. It is understood that bids will soon be asked on the general contract.

Isadore Berger, Newark, N. J., operating a knitting mill on South Eleventh St., has abandoned plans for a proposed two-story top addition, 80x91 ft., for which Warren & Warren, Newark, were the architects.

Urion Mills, St. Johnsville, N. Y., have sold property valued at $2,000 to the Margaret Reaney Memorial Library, according to the files of the county clerk.

Propper-McCallum Hosiery Co., Long Island City, N. Y., is running its various mills at capacity schedule and expects to hold to that basis for an indefinite period.

Aetna Mills of the Wright Health Underwear Co., Troy, N. Y., are increasing operations by taking on many new workers.

Penn Hosiery Mills, Inc., Burlington, N. C., have work under way on the installation of additional equipment. The machinery will be available for service at an early date, when increased production will be started.

*Indicates previous mention of project.

McAllester Hosiery Mills, Inc., Chattanooga, Tenn., are running on a capacity schedule, with orders on hand to insure continuance on that basis for at least 3 months to come.

Richmond Hosiery Mills, Chattanooga, Tenn., report that the mills are enjoying good business and that signs of improvement in conditions is seen.

Galax (Va.) Knitting Mills are adding a new addition which will double the capacity of the present plant. The new addition is 73x100 ft., two stories high, and is expected to be completed by Oct. 1.

Silk

Premier Silk Mill Corp., New Bedford, Mass., has just opened a new 48 loom unit, making a total of 72 looms in operation at the present time. The management is also adding spooling and warping equipment, and plans to add another 24 looms before the end of the year. George D. Woolley, at one time superintendent of weaving at the Bristol Mfg. Corp., New Bedford, is general manager.

Southern Silk Mills, Greenboro, N. C., are holding to a full-time schedule at their plant, as well as the branch mill at Kernersville, N. C. This rate of output will be maintained for an indefinite period.

Loualto Silk Co., Scranton, Pa., recently organized with a capital of $40,000, to operate a silk throwing and weaving mill, will be represented by Thomas F. Kane, Scranton, who will be treasurer of the company. Alexander Ott, Scranton, and Peter L. Walsh, Olyphant, Pa., will be identified with the new company.

Bruck Silk Mills, Ltd., Cowansville, Que., Canada, are operating on a full capacity schedule with a regular working quota and expect to hold to that basis for an indefinite period.

Rayon

American Enka Corp., Enka, N. C., is holding to a full-day production schedule at its mills, giving employment to about 2,000 operatives.

Finishing

Crystal Springs Bleachery, Chickamauga, Ga., is changing all of its picking equipment to the single process system, supplied by the H & B American Machine Co.

Lewiston (Me.) Bleachery & Dye Works have awarded a contract to E. F. Maxim Co., for alterations. A new brick partition and general repairs are included in the work, to cost about $7,000.

Crew Piece Dye Works, Inc., East Paterson, N. J., recently organized with a capital of $125,000, will take over and succeed to the **Crew Silk Finishing & Piece Dye Works,** with plants at Paterson and East Paterson. Officials of the new company will be Philip C. Crew, Alfred Crew, Jr., and Charles Crew.

La Francaise Silk Dyeing & Finishing Co., Inc., Paterson, N. J., recently chartered with a capital of $125,000, to operate a local mill, will be represented by Sidney Alexander, 53 Idaho St., Passaic, N. J., a local attorney. It is understood that the company will take over and succeed the **LaFrancaise Piece Dye Works,** with mill on East Fortieth St., Paterson. The incorporators include Frank J. Percarpio and James Elkind, both of Paterson.

Sheehan Silk Dyeing Co., Haverstraw, N. Y., has been taken over by Frank Schmidt, Jr., heretofore vice-president, and Raymond C. Davenport, previously identified with the Paterson Silk Dyeing Co., Paterson, N. J. The company is being recognized as the **Schmidt-Davenport Co., Inc.,** and will continue operations as heretofore.

Miscellaneous

American Bedding Co., Washington, D. C., recently organized for the manufacture of a complete line of bedding, has a factory and warehouse building at Fourth and Bryant Sts., N.E. Abe Krupshaw, with the Eagle Bedding Co. for 15 years, is president, and J. L. Krupshaw, secretary.

Wolverine Bedding Co., Detroit, Mich., has arranged for increase in capital stock by an amount of 3,000 shares of stock, no par value, with former capital of $30,000 remaining as heretofore.

Rose-Derry Corp., Derry, N. H., manufacturer of mattresses, has purchased, in accordance with its expansion program, the old United States Worsted Corp.'s, Newton, Mass. plant known as Saxony Worsted Mills. The buildings have been idle for the last few years.

Seideman Bros., Philadelphia. The partnership existing between Adolph D. Seideman and Morton Seideman, trading as Seideman Bros., dress and millinery trimmings, cords, tassels, etc., has been dissolved by mutual consent, as of June 15, 1931. Adolph D. Seideman will continue to operate the business under the name of Seideman Bros. Morton Seideman has withdrawn entirely from the business.

Awnbest Corp., Charleston, S. C. The Secretary of State of South Carolina has granted a charter to this company to manufacture and deal in textile fabrics. The officers of the corporation are, Edward C. Coyle, president, William H. Donnelly, vice-president, and Jere C. Healy, secretary and treasurer.

Business Literature

Direct Current Motors. Reliance Electric & Engineering Co., Cleveland, Ohio. Illustrated catalog describes features of type T heavy duty direct current motors and gives specifications.

Formic Acid. Victor Chemical Works, Chicago. The application of formic acid as an acidulant for the dye bath is suggested. Advantages of the use of such a product are outlined.

Pumps. Worthington Pump & Machinery Corp., Harrison, N. J. A series of nine bulletins and catalogs have been issued by this company describing their various pumping units.

Fire Extinguishers. Pyrene Mfg. Co., Newark, N. J. Useful information in regard to the selection and use of commercial fire extinguishers is contained in a pamphlet published by the company.

Hydraulic Turbines. S. Morgan Smith Co., York, Pa. Descriptive matter in regard to the automatically adjustable blade turbine is contained in a new catalog.

Recording Thermometers. The Foxboro Co., Foxboro, Mass. Features of recording thermometers made by this company described in catalog.

Tubular Air Heaters. Babcock & Wilcox Co., New York. Details of the air heaters together with their advantages are described in catalog.

Microscopes. Bausch & Lomb Optical Co., Rochester, N. Y. Catalogs give detailed description, uses, and price list of binocular microscopes.

Coal Pulverizer. Babcock & Wilcox Co., New York. Bulletin describes and illustrates new type C pulverizer.

Electrical Equipment. General Electric Co., Inc., Schenectady, N. Y. Several catalogs describe motors of all types, air compressors, speed reducers, turbine generator sets, automatic time switches, welding units, capacitators, industrial control units, etc.

Conveyer Belts. The Diamond Rubber Co., Inc., New York Practical features of design and maintenance of conveyer and elevator belts are contained in booklet.

Flexible Shafts. The S. S. White Dental Mfg. Co., New York. "Flexible Shaft Handbook," a bound volume of 120 pages, gives facts and figures on flexible shafts, with comprehensive technical discussion of characteristics and uses.

Electrical Service. Electrical Association of new York, New York. Handbook contains 12 sections covering the following classifications: illumination, industrial control, industrial heating, material handling, motors, refrigeration, signals, signs, switchboards, and panelboards, tools, ventilation and wiring.

Industrial Piping and Air Conditioning. Parks-Cramer Co., Boston. Uses and value of Parks-Cramer air-conditioning and engineering service, are described.

Pulleys. T. B. Woods Sons Co., Chambersburg, Pa. New transmission data book gives illustrated descriptions and price-lists of power transmission appliances; also complete dimension tables of each unit.

Motors. Wagner Electric Co., St. Louis, Mo. Bulletin discusses problem of poor power factor and its costs, and reviews early methods of correction; also describes application of **Fynn-Weischel** motor to its solution.

Chain Couplings. Morse Chain Co., Ithaca, N. Y. Midget, flexible couplings of the sprocket and chain type are described.

Water Conditioning Equipment. Elgin Softener Corp., Elgin, Ill. Folder describes continuous blow-down system with Eckel precision control.

Trouble Finding. Adolph J. Winkler, New York. A small folder outlines the functions of the textile specialist and chemist and points out where he may be of assistance to the mill man.

Set Screws. The Bristol Co., Waterbury, Conn. Recent catalog lists advantages of Bristol set screws and gives price lists.

Chemicals. Roessler & Hasslacher Chemical Co., Niagara Falls, N. Y. A handbook of facts about chemicals and a price list of R. & H. products has recently been issued.

Generator Units. Westinghouse Electric & Mfg. Co. Applications of small generator units and their advantages are described.

Propeller Fan. B. F. Sturtevant Co., Inc., Boston, Mass. Specifications for fans and other ventilating units are contained in a catalog issued by the company.

Coal Burner. Babcock & Wilcox Co., New York. Recent catalog describes advantages of the Fuller Lehigh circular pulverized-coal burner.

Soap. Proctor and Gamble Co., Cincinnati, Ohio. The story of soap manufacture is presented in booklet form.

New Machinery *and* Processes

Lubrication of Raw Stock With Diethylene Glycol

By N. D. Harvey, Jr.
Carbide and Carbon Chemical Corp.

DURING the last several months the eyes of manufacturers of woolens and worsteds have been turned to the possibilities of diethylene glycol as a stock lubricant. This material has been found suitable for use under widely varying mill conditions on both wool and mohair.

Chemically, diethylene glycol is a combined alcohol and ether of the formula, CH_2-OH = CH_2-O = CH_2 = CH_2OH. It is neutral, stable to acid and alkaline solutions of ordinary concentration, completely soluble in water, and hygroscopic, picking up 20% of its own weight of moisture at a temperature of 70° F. and in air of 65% relative humidity. Its boiling point is 244.5 C. and its vapor pressure in mm. of mercury at 20° C. is 0.01. Physically, diethylene glycol is a colorless, odorless, slightly viscous liquid, possessing an oiliness similar to that of true oils. This product, however, is not an oil; and in fact, its characteristic properties are in direct contrast to those of oils, except for its oilness to the touch. Because of these properties, diethylene glycol possesses distinctive qualifications which permit manufacturing economies, and at the same time enable the production of finished goods of superior quality.

The theory has been advanced that diethylene glycol, when applied from a water solution containing a small quantity of a surface-tension depressant, is completely absorbed by the fibers and is not present as a surface film. Protomicrographs seem to check this belief, as stock lubricated with diethylene glycol presents clearly defined exterior serrations. These serrations, however, are soft and pliable, a fact very noticeable in stock and yarn because of their softness and loftiness.

Useful in Carding

Advantages of this lubricating action become apparent first in the carding operation. Fiber breakage and card waste are reduced to a minimum; and a high yield of soft, uniform roving is produced. Again, since diethylene glycol is not sticky or gummy, it has little tendency to carry short fibers which may bunch and cause uneven or weakened yarn.

This use of diethylene glycol in water solution is limited in application to the manufacture of those yarns in which softness and loftiness are very desirable, as for knitting. Being completely soluble in water—as contrasted with dilution in the case of materials, such as soluble oils—diethylene glycol is thinned, and much of its lubricating value is lost. Actual lubrication must be distinquished from mere conditioning. A true lubricant furnishes a film which provides cohesion between fibers, allowing them to pass freely and without flying during carding, drawing, and spinning. A conditioning agent provides moisture and eliminates static electricity which causes wildness. Diethylene glycol may serve as either or both, according to the method of application. In general, when applied from a water solution containing a penetrating agent, conditioning is obtained without actual lubrication. When applied in concentrated form, diethylene glycol is a true lubricant.

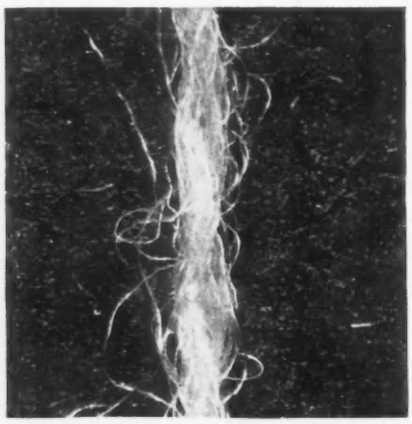


Fig. 1. Worsted knitting yarn spun from stock lubricated with diethylene glycol. Note straightness and parallelism of the fibers and freedom from wildness.

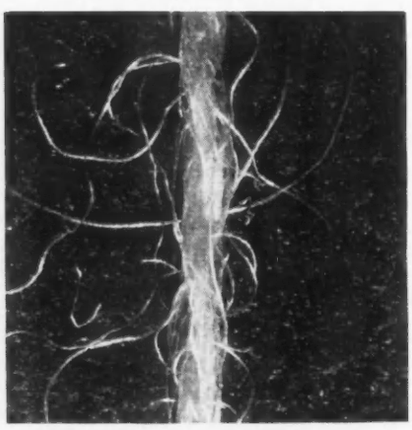


Fig. 2. Knitting yarn spun from stock lubricated with ordinary type of emulsion. Note wildness of fibers apparent in this yarn.

Worsted Yarns

For the lubrication of stock intended for the manufacture of worsted yarn, diethylene glycol, because of its hygroscopic nature, possesses important additional advantages. The larger number of operations involved in worsted manufacture, and the finer counts to which the roving is spun, make it imperative that lubrication be efficient. Straightness and parallelism of fiber are decidedly more important in worsted yarns than in woolen, since fewer fibers are present to provide evenness and strength.

Not only is it desirable that the fibers in a worsted top be straight and parallel, but conditioning is an exceedingly important factor. Wildness cannot be tolerated, as the top will lick-in during the unwinding in drawing, and uneven roving will result, which in turn will carry through to the yarn and cloth. The frictional heat developed during carding tends to dry the stock. Further drying occurs from the heat of gilling and combing, and the combed balls are quite dry and wild. During the finishing gilling, before drawing, a fairly large amount of water is applied in an attempt to compensate for the conditioning which has been lost. The tops are then subjected to an aging period to improve further their condition for drawing.

By the use of diethylene glycol, the drying of the stock during carding, gilling, and combing is counteracted by the attraction of moisture from the air.

The advantages are clearly apparent in the appearance and properties of the top containing diethylene glycol. The fibers are straighter, more parallel, and lie better. The top is well-conditioned, exhibits no tendency toward wildness, and unwinds in the drawing without licking-in, without preliminary aging.

Aid in Dyeing

As stated previously, diethylene glycol is completely soluble in water. Furthermore, by chemical make-up, it is a solvent and dispersing agent for dyestuffs. Tops, slubbing, yarn, and cloth may be dyed without a previous scour. Diethylene glycol not only aids in wetting, but dissolves in the dyebath,

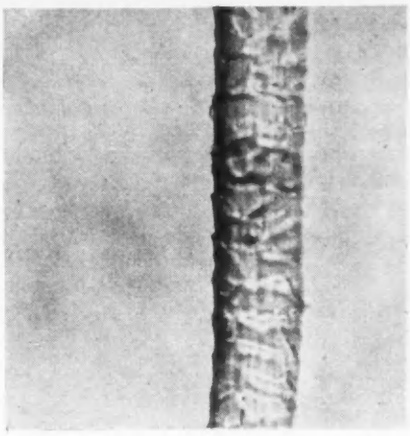


Fig. 3. Photomicrograph of fiber taken from knitting yarn shown in Fig. 1. Note clearly defined exterior serrations which indicate that the diethylene glycol has been absorbed by the fibers

increasing the solubility of the color. Therefore is it of advantage to leave diethylene glycol in the material, as through its introduction into the dyebath, heavier, brighter, and more level shades are obtained. Then too, since there is no necessity of scouring previous to dyeing, diethylene glycol presents the possibility of an economy of time, labor, and power, as well as of scouring materials.

Cloth carbonizing may be conducted either in the grease or after fulling and scouring. If the operation is carried on after fulling and scouring, a certain amount of felting ensues which embeds some of the burrs within the cloth. The penetration of the acid is rendered more difficult by the close, felted condition of the fabric, and there is always the possibility of traces of oil or soap remaining after scouring. Therefore it seems to be the opinion of most mill men that carbonizing in the grease is the more effective method, and that it would be welcomed if no more expensive.

As diethylene glycol is unaffected by acid carbonizing solutions, its use as a stock lubricant makes possible carbonizing directly from the loom without scouring, and therefore at no additional expense. Since dry cloth will absorb more of a solution than will a damp piece, a weaker acid would be used in this case at a further saving.

As no water-insoluble impurities are present in cloth containing diethylene glycol, except for oil spots and atmospheric dirt, scouring is simplified. Danger of cloudy goods is eliminated.

Being miscible with the fulling soap, diethylene glycol will not retard its absorption and fulling commences at once. The quantity of alkali used may be reduced to a minimum, which will do much to preserve the soft handle of the goods and prevent dulling and bleeding of dyed shades.

A distinctive characteristic of yarns containing diethylene glycol, particularly fine yarns, is their materially decreased tendency to kink. This is purely a function of their moisture content enhanced by the hydroscopicity of diethylene glycol. The investment tied up in stored material and the disadvantages and expense of steaming are important items, both of which are obviated by the use of diethylene glycol, as it does away with aging of tops and roving and steaming of yarns.

Absorption of Sizing

In the sizing of wool and worsted warp yarns, the water-soluble properties of diethylene glycol permit yarns treated with this material to absorb the size readily. Better penetration and greater adhesive properties will produce greater protection and better running warps.

Finally, for the manufacture of fabrics to be dry finished and marketed in the grease, general practice has been to card and spin dry. Lack of lubrication results in excessive waste and very unsatisfactory spinning. Hitherto dry spinning has been essential in the production of yarns free from odor and staining. Diethylene glycol is admirably suited for this work, as it will provide the necessary lubrication and will leave no odor or oiliness to satin.

In fact, stock, tops, slubbing, yarn, and cloth containing diethylene glycol remain white and sweet indefinitely. Rancid odors and yellowing is eliminated. Diethylene glycol washes out as readily after long storing as on the day of application.

For industrial application as a stock lubricant, the following formulas are suggested: In the case of woolens, for each 100 lb. of stock use 10.0 lb. diethylene glycol, 8 oz. sodium carbonate, 4.8 oz. sulfonated olive oil, and 3.3 lb. water.

In the case of worsteds, for each 100 lb. of stock use 4 lb. diethylene glycol, 32 oz. sodium carbonate, 2 oz. sulfonated olive oil, and 2.5 oz. water.

The small quantity of sodium carbonate serves as a rust inhibitor. The slight alkalinity which is maintained prevents corrosion which otherwise would occur, due to the absorption of carbon dioxide which produces a slight acidity. Sulfonated olive oil lowers the surface tension of the diethylene glycol, causing it to penetrate into the fibers to a slight degree and thus adhere. Without its presence, there is a tendency for the diethylene glycol to rub off during the processing of the stock. Only sufficient water is added to allow the incorporation of the alkali and the penetrant.

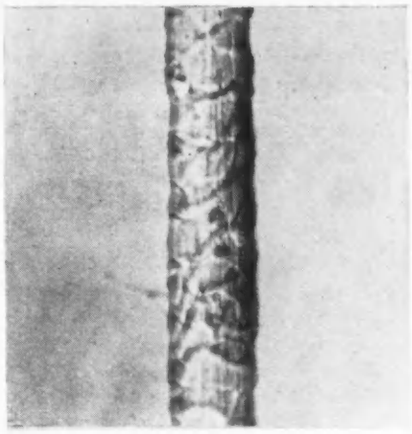
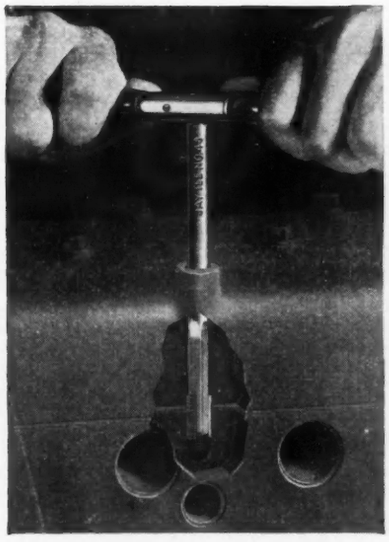


Fig. 4. Photomicrograph of fiber taken from knitting yarn shown in Fig. 2. Blurred appearance of exterior serrations indicates the lubricant is present only as a surface film

Other penetrating agents may be used, such as other sulfonated oils or sulfonated napthalenes. The diethylene glycol is applied to wool in the usual manner at the picker.

On worsted, the accepted lubricating method is used. About 1% is applied before carding, about 3% at the gill box before combing, and 1% before drawing.

The above suggestions are very general, and in various plants modifications may be desirable. Addition of water at the finishing gill box is accepted practice; but with diethylene glycol, it is not recommended, as thinning may occur due to the miscibility of the two.



Cut-away view showing application of screw extractor

Screw Extractors

SCREW extractors embodying unique features which make it possible to take out the end of a broken stud or bolt, without removing or loosening any other bolts, have been announced recently by the Jackman Tool Co., Inc., 5209 Baum Blvd., Pittsburgh, Pa. The Jay Tee line, as it is designated, includes drills, drill guides, and extractors for bolts from ¼ to 3 in. in diameter. There is a specific size extractor and corresponding drill and drill guide for each size of bolt. They are furnished in two standard lengths, one for shallow extracting and the other for deep.

Extractors have also been designed for standard and extra heavy pipe, as has also a grease-fitting tool for removing broken ends of Alemite, Zerk, and Dot grease connections. The latter is a combination tool, having a rethreading tap and broached socket for screwing the fittings in or out.

Questions... *and* Answers

Oil Stains in Knit Goods

Technical Editor:

I am appealing to you in the hope that you will be able to assist me with a problem that has been troubling knitting mills and cleaning-fluid experts for the past number of years and which, as yet, remains unsolved.

It appears that during the process of knitting, certain streaks will appear on the fabrics due to an over-abundance of oil in the knitting needle and to some foreign matter which includes itself in the oil. Ordinary oil solvents have no effect whatsoever on the streak except possibly to lighten it a trifle. The only possible solution that we have found is to send the entire garment to the laundry and have it washed with soap and water. This causes great inconvenience, especially during the rush season, when time means a great deal. (7661)

We note you state that, in order to remove the oil, it is necessary to send the entire garment to the laundry and have it washed. From this we judge that the goods pass directly from the knitting room to the cutting room. To us this seems rather unusual. In most cases the fabric goes from the knitting room to the dyehouse, where it is given one or more of the following treatments: scouring, wetting-out, dyeing or bleaching. It is then dried to width and cut up into the garment segments.

In 99 cases out of 100, oil stains made during knitting are removed in these wet-finishing operations. This may call for a varying degree of treatment, depending on the type of needle oir used and the care taken in keeping the machine clean. If the needle oil is of a high grade—for example, one containing from 15% to 20% saponifiable oil, such as lard or olive oil— the wear on the knitting machine parts will be negligible and the oil stain will not be so black as when a cheap all-mineral oil is used. Furthermore, the needle oils that contain a high percentage of saponifiable oil emulsify readily and their removal is simple. The use of good soap and soda in scouring will bring up plenty of lather and will remove the oil stains.

The principal cause of oil stains which are difficult to remove is the use of the wrong type of oil. Many people think that the use of a cheap oil will make for an inexpensively operated knitting room. This is false economy. Cheap oil, light in body, and containing very little saponifiable oil will not lubricate the machine parts properly. There is a lack of oil-film strength and the result is that a metal-to-metal contact is made and the parts wear off in fine black particles. When these particles are carried by the oil into the cloth, a stain is made which it is almost impossible to remove.

Where a better grade of oil is used and the saponifiable content is higher, the oil has more body and the film strength is greater. Metal-to-metal contact is prevented and very few stains are made, provided too much oil is not used. If a stain is produced, it will emulsify and may be washed out.

Spotting an oil stain with a volatile solvent such as gasoline or carbon tetrachloride only spreads the stain and makes it cover a larger area so that it looks lighter. Where oil stains are to be spotted, very good results may be obtained by using a solvent scouring agent which has been combined with a soluble base. The solvent softens and thins down the stain and the base keeps it in suspension so that it can be emulsified and washed out.

A different condition exists where the oil stain has been obtained from the sewing machine. Here again, an oil light in saponifiable content should be used. The machines must be kept clean and free from lint. When an oil stain has been produced by sewing-machine oil, it can in most cases be removed without washing the whole garment. If a pad of felt or blotting paper is placed under the stain and a solvent such as chloroform is applied and the spot rubbed, the stain can be driven onto the pad or blotter. If the spot is then sprayed with water, no ring will be produced.

Wool Chloring Process

Technical Editor:

Can you inform me to what extent the chloring of wool is practiced in the United States? I shall greatly appreciate any information you may give me on this subject. (7672)

The chlorination of wool is practiced extensively in Germany—particularly on yarns that are intended for half-hose, underwear, and bathing suits, as it imparts luster and destroys any tendency to shrink or felt. Americans do not seem to take kindly to the glossy, worstedlike nature of the goods; and as far as we know only a small quantity has been so treated in this country.

Carpet manufacturers have tried it in the past, but the practice does not seem to have become popular. A low grade carpet yarn may be benefited by such a treatment as may be shown by the effect of the Oriental wash now used on all Oriental and American Oriental rugs. In such cases the operation is reversed and instead of being applied before dyeing it is carried out after the rug is made. The operation consists of first washing in dilute caustic soda and then in hypochlorite or bleaching lime. This is followed by a scour with acetic acid. The true chloring process, however, employs an acid bath before dyeing. In both cases the scales, together with any scurf and adhering encrustations, are removed from the surface of the wool fiber, making it smooth and glossy. Mechanically, it also untwists the pile fibers and makes the surface more like fur than like a textile product.

Another use of chlorination, which is quite general, is in the treatment of wool cloths that are to be printed. The chloring gives the wool a greatly increased affinity for acid dyes and results in sharper and brighter prints.

▼

Problems in All-Rayon Taffeta Weaving

Technical Editor:

What information can you give regarding the weaving of an all-rayon taffeta? We have considerable difficulty in making a grade "A" cloth of this construction. Shiners seem to be the greatest trouble. Then again, there seems to be a variation in the shade of the filling from one quill to another. The stock is supposedly all one lot. We are using 'B" Viscose 150-denier both ways. (7662)

Since you did not supply us with a sample swatch of the fabric in question, it is rather difficult for us to determine just what is causing your trouble. However, we shall point out a few causes of the defects you mention and you can check up on these.

Shiners are very often caused by excessive tension in the shuttle. This may be due to the shuttle being furred too heavily, thereby imparting an uneven or jerky tension to the yarn.

Check over your quillers and make

sure that all guides and tension devices work freely. If these have been bent, the yarn is likely to be stretched. See that the yarn has been treated properly before being put on the loom.

Make sure that there are no rough or sharp edges on the shuttle guides, pickers, or shuttle boxes. Look over the picking motion and make certain that no back lash is imparted to the shuttle. When the harnesses are level, the crankshaft should be slightly over center.

Shade variations are caused mostly by improper treatment of the yarn in dyeing. If you have the facilities to run this fabric with two shuttles, by all means do so. Thus your shade variations will be reduced to a minimum. Sometimes shaded appearance is the result of "warp bouncing." This is caused by uneven lifting of the harnesses for the various sheds.

▼

Color Changes in Full-Fashioned Hosiery

Technical Editor:

We are inclosing a full-fashioned stocking which has a noticeable color change at the topper line. We refer to the color change in silk at the instep. We should appreciate your opinion as to why the fabric knit on the legger takes a different shade from that knit on the footer. (7649)

There are several reasons why the silk in the foot of stockings will dye differently than the silk in the leg. In this particular instance, it is our opinion that the silk used in the leg did not come from the same lot (and possibly not from the same throwster) as that employed in the leg. Some throwsters prepare their softening solution with mineral-oil emulsions to facilitate winding of the silk; others use olive oil, olive-oil soap, neats-foot oil, sulfonated oils, and mixtures of any of these. If all the silk used in knitting came from the same throwster and was prepared in the same way, the danger of having different shades in dyeing would be eliminated to a great extent. However, when different solutions have been used, it is impossible to get an even shade.

Some lubricating solutions also contain mineral oils. It may be that the legger uses a different solution than the footer, and this may cause a difference in dyeing. We have in mind a case where a knitter used kerosene to make a tighter stitch in a reinforcement. In spite of every effort on the part of the dyer, that reinforced piece which contained the kerosene-soaked silk was always a shade or two yellower than the rest of the stocking. After an investigation the kerosene solution was abolished.

It may also be that the silk in the foot is considerably older than the silk in the leg. This condition will cause uneven shades, due to the fact that the softener on the older silk will be dry and will have oxidized on the fiber.

Dyeing Silk and Wool Mixture

Technical Editor:

We are enclosing a sample of yarn consisting of a silk and wool mixture. We are interested in learning how to dye this yarn on the bobbin. The piece of cloth enclosed shows white spots which we believe are silk specks which will not take the dye. We have been informed that the silk would have to be degummed, is this true? (7656)

Soft, open yarns are dyed on bobbins in cases where lack of perfect uniformity is not important; for example, the cotton or jute filling threads used in the back of carpets. If you want a level, solid shade to make a plain fabric, you can get that result by dyeing in a package-dyeing machine. This however, would involve two more windings. Your problem is further complicated by the specks of gum silk located throughout the mixture. The schappe, noil, and florette silk should have been boiled out in soda, dried, and willowed to remove the hard, coarse particles before they were mixed with the wool. Now that the wool is present it is not possible to submit the yarn to boiling alkaline liquors without causing injury. We believe the best way to handle this material is to weave it plain and piece-dye it.

The first treatment would be immerse the fabric overnight at not over130° F. in a strong soap bath reinforced with ammonia and phosphate of soda. The next morning, rinse well in warm water. Most of the silk gum will wash out, and the wool will be left unharmed. It is best to dye with the neutral-dyeing acid dyes, although many direct cotton colors are also suitable. These colors tend to give uniform shades on both fibers, whereas ordinary acid colors are likely to overdye the wool and leave the silk bare.

▼

Tender Warp in Carbonized Piece Dye

Technical Editor:

We enclose a sample of a piece dye which is one of several pieces having tender warps. Other pieces from the same warps were strong. All of them were scoured, carbonized, and dyed. Can you tell us why the pieces should be so tender in the center and gradually get stronger towards the selvage? (7660)

The only solution we can come to is to presume that you are carbonizing in the open width and that the center of the cloth is holding more acid than sides. That is to say that the sides are subjected to a more intense squeezing action than the center, thereby allowing the center to carry more acid into the drying chamber. An excess amount of acid carried into the drying chamber will do more harm than the application of too strong an acid. To prove that this is the trouble, run a piece through the acid; then extract thoroughly before drying. The fact that the filling is quite strong, while the warp is quite weak, shows that the size of the filling yarn is such that it can carry more moisture or acid than the warp, which is made up of a much finer count of yarn.

▼

Oil Stains on Rayon Crepe Filling

Technical Editor:

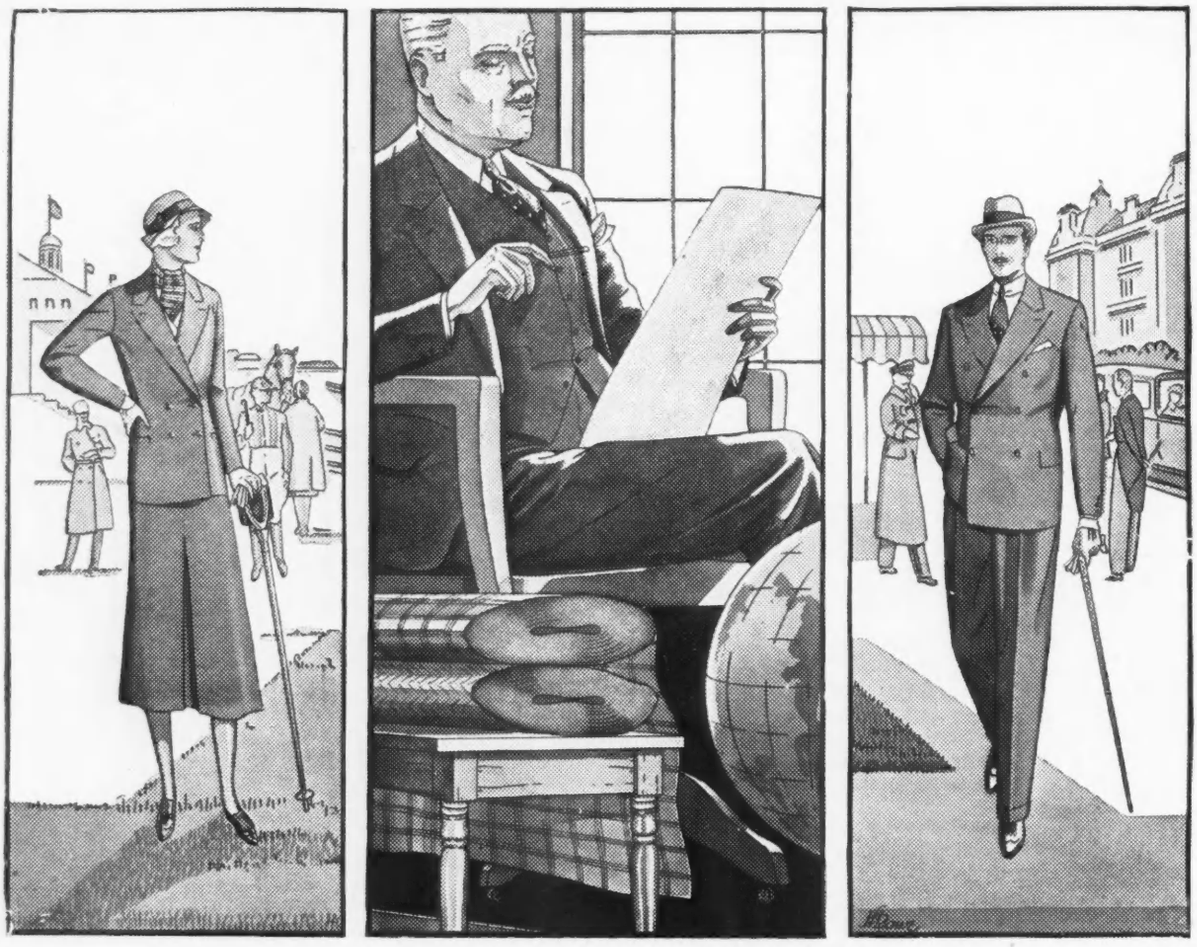
Enclosed please find a swatch of rayon having 100-denier crepe filling. Will you kindly give us your opinion as to the cause of the dirty streaks and where to look for the trouble? Would it be caused in the throwing or would it be caused in the weaving, from the shuttle not being clean and binding the filling in the boxes, from machines throwing oil, or from dirty loom boxes? Cops may be dropped on the floor by a careless weaver and thus gather some dirty oil. Will not rayon crepe filling absorb dirty oil more readily than real silk crepe filling? (7647)

The sample submitted shows the dirty filling to be on one twist and not on the other. This eliminates the possibility of the loom being at fault, and places the blame on dirty quills. When the shuttle binds or pinches the filling in the box, this trapped filling will show in the cloth after finishing. It will appear as a defect from the point of trapping to the edge of the cloth and will not be restricted to any one twist. This same rule holds true in case the boxes are dirty. When the loom splashes oil, irregular spots will show up in the finished cloth.

The sample shows that this particular quill had been handled carelessly. It may have been dropped in oil, or the drive side of the quiller may have splashed oil into the end bobbin. Weavers should be instructed to retain all quills showing oil or dirt so that the dirty quills can be woven into one piece which can be dyed a dark shade, thus hiding the defect.

Both rayon and silk will absorb oil; and regardless of the method of boil off, the oil, after soaking into the twist, will cause trouble, especially after the filling has been woven in.

Inquiries should give the fullest information possible; and if damaged material is involved, a sample should be sent. We give no consideration to anonymous inquiries and do not undertake routine analysis of yarn or fabric, or investigation involving unusual expense.



Unseen Value

IN every fabric are hidden values you cannot see. To the *eye-value* of style and finish must be added the *wear-value* of quality. And only the maker of the cloth knows the quality of material, color and weave that go into its making.

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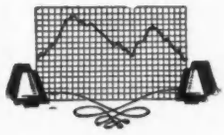


Strong Wool Situation Has Its Limitations

By Dr. L. H. Haney

SEVERAL constructive developments have taken place in Europe during the last month which, though negative, at least remove threats to the stability of the wool industry. In the first place, the strike in Yorkshire has been called off, and a cut in wages accepted. This action makes for lower costs and may stimulate consumption of wool textiles. Secondly, some German banks and the Boerse have reopened for business. True, prices were acutely weak on the opening day of the Boerse, but this had been largely discounted. The closing of the German financial institutions had given rise to much political and economic uncertainty and acted as a depressing factor on all business including the wool industry. In general, the wool industry of the United Kingdom and Continent is quiet and unsatisfactory. The only raw wool sales abroad were at Sydney, where a decline in prices occurred.

In this country the pace of manufacturing wool textiles has become more rapid, and all branches of the industry show improvement, although not in equal degree. The worsted branch continues to lead, and is approaching the post-war peak levels of 1923. The activity in the industry has probably attained enough momentum to keep manufacturing at a high rate for several months and to sustain a large demand for raw wool. But, volume has been gained at the sacrifice of prices and competition is keen. The unfavorable relationship between demand and supply as a whole is indicated by further sharp declines in replacement margins.

The raw wool dollar has shrunk in purchasing power in recent months, because of the rise in wool as compared with general commodity price declines. Wool is dearer than silk and is out of line with cotton. Since general business is still on the downgrade, the conclusion seems justified that the wool industry is a consumption industry in which replacement demand causes a cycle of roughly two years in duration, and that we are now approaching one of these two-year cycle peaks.

Favorable Factors

1. The strike in Yorkshire has been peacefully settled, the workers agreeing to a reduction in wages.

2. Stocks of tops in continental commission combing establishments on August 1, were below those of July, or a year ago.

3. Foreign prices are still above parity with domestic prices for similar grades of wool in the United States.

4. Imports of clothing and combing wool in July less than 25% of July, 1930.

5. Total receipts of raw wool in the United States were not so high compared with consumption as last year; stocks not increasing so rapidly.

6. Demand for medium and lower grade wool increased considerably; woolen wools in steady demand.

7. The index of mill consumption of raw wool increased more than usual in July; not since 1923 has wool been consumed at the July rate. Prompt deliveries are called for, and some grades of spot wools are scarce. Manufacturers are believed to have covered only nearby requirements.

8. The adjusted index of machinery activity in July was the highest since April, 1929. Activity of cards made the largest July gain on record; combs gained more than usual; worsted spindle activity was at the highest rate since the peak months of 1923.

9. Knit goods stocks are reported to be low.

10. Some men's wear worsted mills are working overtime. Good demand for women's cloakings and dress goods. Sales of all goods estimated to be at least 15% greater than a year ago.

Unfavorable Factors

1. The Sydney auctions opened with prices 5 to 15% below previous close; withdrawals were large.

2. Bradford top and yarn prices declined during August; top prices were easier in Germany during July.

3. Surplus stocks of raw wool in the United Kingdom increased 185,000,000 pounds between the beginning of the year and August 1, and exceed the accumulation of a year ago.

4. Stocks of washed wool in German commission scouring mills at the end of July were larger than the month before or a year ago.

5. Manufacturing activity abroad is restricted, because of economic and financial uncertainty. The consumption of raw wool in the United Kingdom in July was below that of July, 1930 or 1929, and exports of wool goods thus far in 1931 are below all recent years.

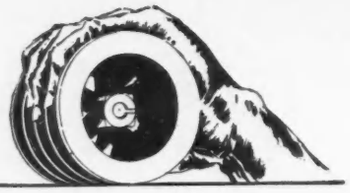
6. Receipts of raw wool in the United States are above their average relation will mill consumption; stocks are probably increasing.

7. Top prices at Boston declined during August.

8. Yarn prices were weaker, and the

Summary: **Consumption of raw wool by the mills will probably be large for several months, and raw prices will tend to be firm. Several adverse developments have appeared which will limit the advance in wool prices. Yarn and cloth prices will probably show less strength than raw wool; better control of production is needed to bring prosperity.**

The analysis and forecast by Dr. Lewis H. Haney, director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.



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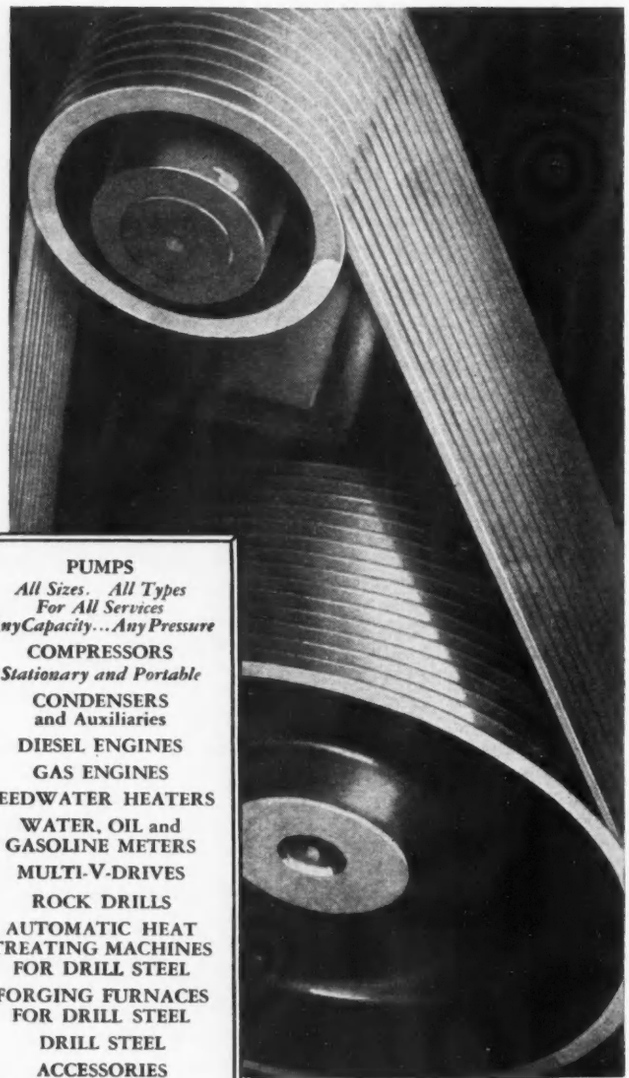

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spinners' replacement margin fell to a new low. Worsted spindle activity appears to be excessive at the current rate of loom activity.

9. Wholesale dry goods sales, adjusted, fell to a new low in July.

10. Woolen and worsted goods prices declined to a new low in July, and manufacturers' replacement margins have fallen to the lowest level in recent years.

11. Prices for lightweight goods were reduced at the Spring openings.

12. Weak security markets, new low levels for commodity prices, and reduced purchasing power. The P/V Line is below normal and business recession continues.

13. The sharp break in cotton prices and recent advances in raw wool prices increase the relative dearness of wool.

A critical estimate of the foregoing factors gives these results: Activity continues to increase in this country in contrast with quietness abroad. Prices of raw wool have advanced in the United States while declines have occurred in Australia. A continuation of these trends would bring domestic prices up to an importing basis. However, imports are chiefly of carpet wool, and as yet the combing and clothing grades are not entering in large quantities.

But although mill consumption of raw wool is at peak levels, total receipts are probably larger, and stocks of raw wool must be increasing somewhere. This emphasizes the easy supply situation. However, the increase in raw wool stocks is at a much lower rate than last year. Prices are strong in the United States and as consumption is broadening to include medium and low grade wools and probably woolen wools, a firm raw wool market may be looked for. The weakness in top and yarn prices in August, however, and the lower prices for lightweight goods have impaired manufacturers' margins and suggest that the peak in consumption may not be many months away. Should consumption fall off, stocks would probably increase and advancing prices would be checked.

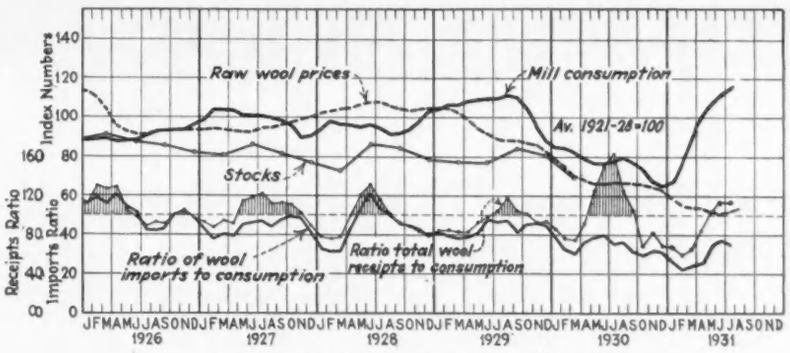

Fig. 1. RAW WOOL BAROMETER:

*Price—*TEXTILE WORLD *Index; Mill Consumption — Grease equivalent, average daily adjusted for seasonal variation, three-month moving average; Stocks—U. S. Total, grease equivalent, end of quarter, adjusted for seasonal variation. Ratio of Total Raw Wool Receipts in the U. S. to Mill Consumption—Receipts not reduced to grease equivalent, adjusted for seasonal variation. Consumption as above, three-month moving average. Average for 1921-1928 = 100 for all four indexes. Ratio of Raw Wool Imports to Mill Consumption—Imports not reduced to grease equivalent, adjusted for seasonal variation. Consumption as above, Average 1921-1928 = 50, three-month moving average.*

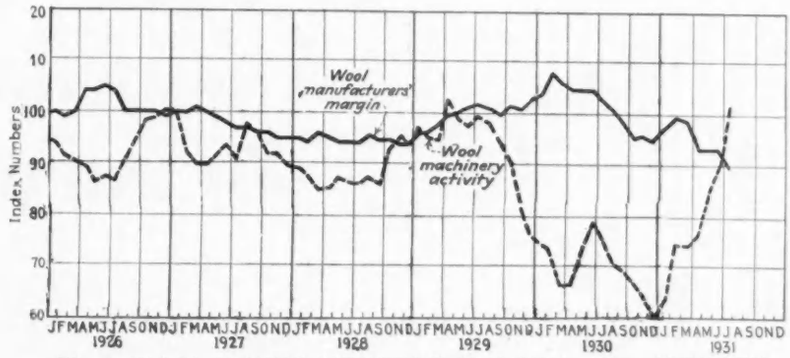

Fig. 2. WOOL MANUFACTURERS' MARGINS AND ACTIVITY:

Wool Manufacturers' Margins—Average of replacement margins; Wool Machinery Activity—Composite of loom and spindle activity, adjusted for seasonal variation; Average 1923-1927 = 100 for both indexes.

WOOL PRICES RISE FURTHER

The TEXTILE WORLD index of raw wool prices during August rose to 52.2% of the average for 1921-28. This compares with 51.7% in July and 65.9% a year ago. It is the first time since 1928 that the price index has advanced for two consecutive months.

The index of average daily wool consumption increased sharply in July as compared with a normal decline of nearly 5%. The seasonally adjusted index was 128.8% of the average for 1921-28 against 104.5% a month ago and 82.9% last year. (The curve appears as a three-month moving average in Figure I.) As was the case last month precaution must be taken to allow for the large increase in carpet wool consumption.

Similarly in the case of imports, the gain has been chiefly in the carpet wool division. July imports of clothing wool decreased 22.0% from a year ago, while combing wool imports were 83% lower. Imports are low compared with consumption, which fact helps to confirm the opinion that domestic prices are below parity with similar foreign grades.

Raw wool prices will probably be strong as long as activity in manufacturing branches continues to increase. The sharp gain in the activity of cards in July indicates that demand for woolen wools is growing, and the danger of a sharp slump in wool mill activity when orders for worsteds are filled, is less likely to occur. Nevertheless, wool consumption and manufacturing activity are above normal, and are probably approaching a peak. If and when this occurs the effect of raising stocks of raw wool, declining foreign prices, cheap cotton, a declining general price level, and unsatisfactory margins will tend to hold the rise in the price of raw wool to moderate proportions.

The TEXTILE WORLD index of worsted sales yarn prices in August was 64.0% of the 1921-28 average against 66.0% in July and 77.8% a year ago. It may surprise some that when business is brisk enough to cause many yarn mills to work overtime, prices should merely hold for a while and then decline. But as we pointed out, worsted spindle activity has increased so rapidly compared with loom activity that the largest maladjustment since 1923 has developed.

Spinners' replacement margins have consequently declined to a new low for the post-war period. The rise in raw wool and the decline in yarn prices in August caused the decline in the margin to be very sharp. Since the present maladjustment is the largest since 1923, and a prolonged decline in the replacement margin then followed, better balanced production of yarn seems to be essential.

CLOTH PRICES DECLINE

The woolen and worsted goods price index of the Bureau of Labor Statistics declined to a new low for recent years. The July index was 74.3% of the average for 1921-28 against 74.9% on June and 86.8% a year ago. Further weakness in cloth prices appeared in August when the new lightweight openings were made at lower prices.

Competition is keen, and the large volume of cloth production, which is indicated by the greatest spindle activity since the April 1929 peak, does not mean prosperity. Manufacturers' replacement margins in July declined to a new low for recent years and probably fell again in August. Demand for textiles as a whole is reflected in a new low for wholesale dry goods sales. It is advisable, then, that wool cloth production be better controlled, for consumer demand shows no sign of expansion beyond that of replacement buying.

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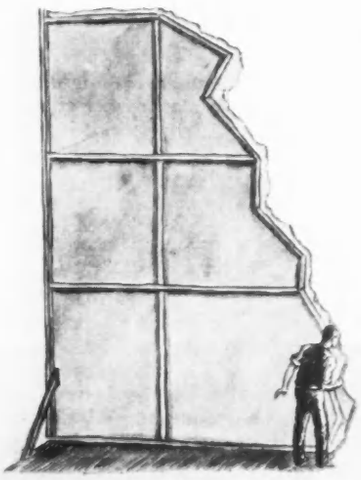


Behind the scenes with your publication

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

◆Cotton Yarns Seek Stable Basis

GRADING in cotton yarns has been rather limited around the Labor Day week-end holiday. The desire to await the second Government report on the cotton crop was a restraining factor, as many looked for a definite indication of the situation as a result. With a report apparently confirming the earlier figures, there is a general feeling that the future would see greater development in trading in cotton which so far has not been active. The trade is convinced that the cotton yarn market is due for more definite stabilization. As previously stated in this column, cheap cotton has always produced a good volume of business, and the trade feels this year will be no exception.

Inquiry for yarns for prompt or immediate shipment forms the dominating feature to-day. In the face of this, supplies of stock yarns on hand are anything but plentiful. The call for yarns is also broadly distributed, so that with the exception of certain outstanding staple numbers, the demand varies from week to week for different counts and grades. Many dealers admit they have limited supplies on hand, and with the number of mills in the South either closed down or operating on reduced schedules, it is not always easy to maintain a steady supply. A manufacturer of underwear recently was looking for a spot lot of a certain carded knitting yarn, but as he was unable to secure the delivery desired, he placed his order for yarns to be delivered from the mill.

Inquiry for Underwear Yarns

Inquiries for underwear yarns recently have been one of the leading features in the market. Conditions with these mills apparntly have been favorable and demand centers on the coarse counts, although there is some call for medium yarns. The range runs from 10s to 22s for nearby deliveries, although one sale noted is for about 50,000 lb. of 12s calling for deliveries of 12,000 lb. a week for a month. Average prices are from 14 to 15c. for 10s, according to quality of the yarn as well as conditions surrounding the sale; 22s sold at 17½ to 18c.; 30s at 22 to 23c. As a result of business on these yarns one house states one of its mills is now running full time, turning out three times the production of last May.

Weaving yarns are quiet and buying is almost entirely on a hand-to-mouth basis. Prices are inclined to be erratic, with 20s-2 warps around 17 to 18c.; 30s-2 at 21 to 22c. These mills have not been active lately. Plush looms are said to be operating more on cloaking materials than for upholstery fabrics, but not much at that. Carpet mills are operating broad looms, but narrow looms are dull.

Sales of combed yarns have not been very active. There is some call for single yarns for underwear with 10s at 21 to 22c., and 30s at 30 to 31c. Business on ply yarns continues to be scattered. Mercerized yarns also are not very active. Specifications against orders continue to be unsatisfactory. Prices are generally unchanged from the quotations noted on page 52 for yarns of best quality.

◆Cotton Crop Report Has Small Effect

THE feature of the week in the cotton market was the Government crop report which was issued at noon on Tuesday. There has been considerable evening-up of commitments preceding the Labor Day adjournment, and the report, which was not far out of line with expectations, had comparatively little effect on the market. The increase in the crop figures as compared with the Aug. 1 indication brought in some selling which broke prices into new low ground for the season, but the decline amounted to only about 15 points as compared with the closing quotations of the Friday preceding Labor Day and the market later steadied on trade buying and covering.

Bearish sentiment based upon the extent of the indicated available supply and the expectation of increased hedging as the season advances, remains much in evidence. Selling on these views, however, is restricted by the low level of prices and a continued absence of hedging in any particular volume. The latter seems to result partly from the disposition of farmers to pick and sell slowly, while there is also a disposition to await the outcome of the State movement for reduction of acreage. Any assurance of an adequate reduction in acreage next spring through legislative enactment would doubtless attach increased value to the current crop.

The Government report placed the indicated crop at 15,685,000 bales compared with the Aug. 1 indication of 15,584,000 bales. This increase in the indicated production was due to a reduction in the estimated acreage for harvest rather than to an increase in the indicated yield per acre. The report as of Sept. 1, in fact, showed a reduction in the indicated yield, placing it at 183.6 lb. per acre, compared with the Aug. 1 forecast of 185.8 lb. The Aug. 1 report, however, was based on the acreage reported under cultivation July 1 with an allowance of 3.4% for the ten-year average abandonment. The

(Continued on page 50)

◆Worsted Yarns for Immediate Delivery

INQUIRY for yarns for prompt delivery to meet current needs is the predominating factor in the worsted yarn market. This situation is especially true with knitting mills. Manufacturers of sweater coats for both men and women are said to be taking in shipments against contracts for these yarns, apparently indicating active operations in certain quarters on these lines. Those manufacturers who delayed specifications for these yarns, in several instances find it difficult to secure deliveries as needed because of the demand. Several have been obliged to go out and buy additional small lots to fill in, it is said, and in such cases, although having yarns on contract at around 90c for single 18s quarter blood, they are being obliged to pay 95c to secure yarns needed to maintain production.

Sampling Swimsuit Yarns

Some sampling in bathing suit yarns is also reported. Several manufacturers are said to plan to open their lines in the next week or so. However it is not expected that any real business will develop until later in the fall, around November or even December, although stocks of finished goods are reported almost exhausted. These manufacturers apparently are planning to pay around $1.10 for yarns based upon ideas given them by jobbers as the price limit for the goods. If this is the case, it is expected that yarns of 56s/58s quality will be more general in so-called "zephyr" yarns, than the 64s of last season as knitters claim they cannot pay the prices asked for yarns in this grade, which run around $1.35. Some spinners are offering a substitute yarn at around $1.18½, but knitters say this is too high for them. Some spinners are offering single 16s in 56s/58s around $1.10 to $1.15.

There is little business reported on men's wear yarns. While lines are not yet opened, there has been some little yarn buying in anticipation. Most of this business is reported in 2-30s in 64s quality French spun fancy mixes, at around $1.40, although some reports of $1.37½ are also noted.

Watching Women's Wear

Developments in dress goods are still too indefinite to indicate any decided trend. Wool crepes are considered promising in various styles, with also some boucles. While worsted dress goods are believed to show signs of a good season, there are many factors who believe the wide variety of snappy colors in woolen yarns, with the possibilities of manipulation in the use of

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

nubs, etc., for rough faced fabrics, will not be neglected by any means. There are reports of delayed deliveries of yarns because of cancelled orders for goods. Orders for yarns consisting of specialities, would certainly not admit of cancellation, as spinners would find it difficult, if not impossible, to use them elsewhere.

Jersey cloth yarns are reported showing activity down East, with single 26s and 28s firmly held around $1.10.

◆Buying of Wool in Smaller Volume

THE wool position is considered sound and healthy, but the manufacturing situation has developed indecision of late. Manufacturers are apparently holding up the buying program until they see definite business placed. Mills' buyers continue to sound out the market but are not making any heavy purchases. It is the belief of the wool trade that the quiet period now seen in mill buying will give place to substantial purchasing later in the month. In this connection it may be noted that the consumption of wool, grease basis, in July of 53,886,000 lb. was the largest amount utilized in any month since October, 1929.

Demand for territory wool continues in fair volume. Original bag wools are still in good supply at from 52c. for New Mexico and similar, 55 to 57c. for Nevada and Utah, and 58 to 59c. for Montana and Wyoming. Three-eighths blood at 50 to 52c. is at the high point for many weeks and low quarter-blood wool, on account of short supply, has moved up to a new high of 40 to 42c. In fine and half-blood graded wools quotations remain unchanged. In fleece wools demand for three-eighths blood shows no let-up.

With yarns and goods sold on a lower basis the desire of mills to establish an easier wool price is nevertheless without response on the part of the wool trade.

The opening of the Australian selling period at Sydney last week was generally as expected and while prices were lower as compared with closing rates of previous season, they did little else than fall to a parity with current London basis.

◆Substitutes Await Woolen Expansion

WHILE demand for rags and clips is still slow, gradual improvement is following the better manufacturing situation developing in woolens. The woolen branch made a gain of 4 per cent in July as compared with June and during the month of August this headway was probably maintained. Knit stocks which have been dull for a period are showing a little more life, although prices on such leaders as white knits and light hoods are still in favor of buyers. Although all kinds of white materials are on a low basis, many colored rags and substitutes have a field all to themselves and the demand for cheapness will ultimately bring in substantial business.

Not much complant is heard regarding any large over-supply of wastes. Where mills run both the woolen and worsted systems practically no waste comes onto the market. The card waste is put back into mixing and the threads are garnetted while the lap waste is just as good as virgin wool.

The noil market, though quite inactive, is in good shape to supply consumers with substantial quantities of noils in several grades on current firm basis which, on larger demand, is likely to develop quite easily an upward tendency. The slowly rising trend in the manufacturing of woolens may, it is said, put new life into the noil market in the not remote future. In the meanwhile dealers are selling a little material around current level for 38 to 40c. for fine noils.

◆Inferior Rayon Stocks Decline

RAYON producers entered the post-holiday week quite well satisfied with demand. Both knitters and weavers are manufacturing actively and shipments are backward on the more popular 150s. It seems clear that the bruited shortage is not going to be an immediate problem —if it ever does develop. Manufacturers of yarn talk less about shortage possibilities and are settling down to meeting demand as it comes. Some firms did less business in August than in July but the summer as a whole was exceptionally active.

One of the healthy signs of the fall season is the steady drop in available stocks of inferior. There is still a considerable quantity of this yarn procurable in New York and it finds ready takers at 50 to 60c., but the stocks have declined to the point where they have less effect on standard yarns. Several rayon companies that specialize in selling to the knitting trade find difficulty in making deliveries and they discourage the acceptance of new business by their salesmen. Generally stocks of yarn are close to demand; production still hovers about 90% of capacity and is expected to remain at that point for another six weeks at least.

◆Tie Silk Demand Helps Throwsters

BOTH thrown and spun yarns are in a better potential position; sales of thrown silk have increased and spinners, while they are not getting much business, are being assured by their customers of active buying later in the middle of the month. Thrown yarn prices are firmer and the turnover is good. There is a fair call for all yarns; organzines have picked up considerably due to increased call for tie silks, and crepe yarns also are moving. Hosiery mills continue indifferent but some resumption of buying by that industry is looked for shortly.

Indications are that the fall season for spun yarns will be brief and will run right into the spring season. Spinners were told this week by numerous important weavers that they plan to cover for spring, beginning early in October.

◆Silk Prices Steady, Little Buying

THE raw silk market entered the post-holiday week in hopeful mood. Movement of stocks has been fitful and the activity which was expected to follow Labor Day has been slow in developing. Last week saw some fluctuations but prices steadied Tuesday and signs pointed to a moderately stable market. Neither weavers nor knitters are showing much interest which is explained by the fact that the holiday lull also has slowed up fabric and finished goods sales. The manufacturers as a whole and especially the weavers have minimum stocks of raw silk on hand, and importers are relying on a pick-up beginning next week.

Silk factors raise the question as to whether the surplus stocks bonded in Japan ever will reach the consuming markets; several who discussed that point this week claimed that the long period of storage has affected the quality of the stock and suggested that the larger part might eventually have to be discarded, or at best sold as inferior; this would mean a substantial loss to the Japanese banks and the filatures though it would help the tone of the international silk market. The main issue as to possible deterioration hinges upon the amount of technical care given to the storing of the stocks.

Meanwhile the Yokohama market holds firm at slightly higher levels than New York. Stocks there are not large; they approximate 18,000 bales and the prospects point to continued steadiness in Japan.

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

◆Cotton Goods Retain Fair Stability

THE Government cotton crop estimate issued last Tuesday as of Sept. 1, which confirmed the crop expectancy of over 15½ million bales first disclosed early in August, did not make much of an impression on the raw cotton market, and it is expected that the same or even greater stability will result in the cotton goods market. The passage of only a few days since the report has not been enough to try out the goods market, but the situation is one which leaves most merchants with their optimism untarnished.

Many buyers have been holding out of the market awaiting more definite news on cotton prospects and whether they will operate now in large enough numbers to make a really active market remains to be seen. Selling agents are hopeful that by the middle of the month a movement will have been started. It is doubtful, however, that such a movement will go further than covering nearby needs, for the feeling still presists that when the bulk of the cotton crop begins to move prices will be forced lower. Selling agents' argument that prices on goods are in many cases based on 5c. cotton does not make much impression on buyers.

Last week was generally quiet. The Labor Day holiday had its influence and the other restraining element was the advent of the Government crop estimate. Both of these are now past. After Labor Day the fall season is considered actually to have begun, and the crop estimate gives no doubt as to what the Government experts think of the prospects. Organizations which have been talking about an avalanche of business after the holiday have been less enthusiastic over the immediate future though convinced nevertheless that the low prices now current on goods will before long result in a truly large distribution.

The crop report issued at noon Tuesday was 15,685,000 bales. When trading began again after the report, the market broke 15 points or so but by the close had rallied some 22 points. A side light on the lateness of the crop is to be found in the ginning figures which were 1,000,000 bales below last year's figures for the same point in the season.

Cone Export & Commission Co. on Wednesday priced denims for the rest of the year at 9½c. for the 2.20s, a reduction of 1½c. from the previous level and the lowest basis since 1908. Other makers are expected to follow suit.

The fact that several leading houses anticipated lower cotton to a certain extent when 2.20s were placed on an 11c. basis is to be considered in appraising the figure which has been named. In some quarters it was intimated that that price would not be changed, but elsewhere a fair reduction was expected.

Rayon mixtures and all rayon goods in the field of cottons are moving forward with continued good support. Further praise is given this week in some quarters to the merchandising of rayon which has so well maintained the price of the yarn over the last few months when cotton was weakening. The new cut in acetate prices is a minor point, as acetate yarn rarely goes into cotton mixtures; the price of viscose yarn which goes largely to cotton mills, has been stable since January.

◆Women's Wool Goods Price Break Feared

THE holiday has acted as a brake on movement in the woolen and worsted goods market this week, but agents look to some spirited reordering on fall lines next week. The lull in women's goods, especially cloakings has resulted in the accumulation of some stocks and agents are apprehensive of a possible break in prices next month. Buying has been backward throughout the season and production was not sufficiently curtailed. It is estimated that 75% of the cloaking business for fall has been placed, but much uncertainty clouds the prospects for the remainder; cloaking levels to date have held steady and a moderate profit has been made. It is doubtful whether the remainder of the season will be as satisfactory. Cutters and retail piece goods buyers seem convinced that prices are moving towards a break and they are holding orders at minimum.

Fall suitings also are quiet but this let-up is regarded as normal for Labor Day week. Cancellations of early commitments continue and it is difficult to gauge the immediate prospects. Stocks are somewhat more plentiful; agents insist that a break is unlikely. Reorders are steady enough to balance up for the cancelled business, they claim.

Mills are nearly ready with their spring lines and openings will be the center of attention next week. It seems certain that three-eighths serges will hold steady, if they do not advance. The sales manager of an important house said this line is so unprofitable at present prices that he would recommend dropping the line unless prices hold their levels or go up. What the chief fabric company will do on its 1932 fancies prices has been a topic of keen speculation this week; there is a growing feeling that the downward revision, if any, will be less than originally expected. The great strength of three-eighths, to cite one example, is expected to make mills hesitate about cutting. Some reduction, possibly 5%, is looked for though several important lines may hold current levels.

◆Canton Demand Shows Trade-Down

A TRADE-DOWN tendency in the dress industry has accelerated the demand for medium to low-priced canton silks, and weavers find their better grades less active. It could not be said that any cantons are sluggish as cutters are low on fabric stocks and are buying steadily but the emphasis is noticeably on the cheaper numbers. Crepe-back satins continue a leading range and while Labor Day week-end brought its usual slackening the market tone is very firm; outlook for the remainder of the month is promising.

Browns, hitherto the chief color preference in satins, have been yielding place to black and white though this trend has not gone far enough to indicate a definite turn. The wine shades are still enjoying good call. Satin stocks have increased somewhat and weavers have no difficulty in filling orders for spot shipment. Quality satins are better than quality cantons; manufacturers of satins in the $1.35 range and upwards have enjoyed a healthy movement up to the holiday interruption.

Semi-sheers show improvement for winter evening wear. Plain georgettes, chiefly in the pastel shades took on some life last week and there is promise of increased business at that end shortly.

The statistical position of the broadsilk market has not shown any material change. Prices still afford moderate margins, and demand, while backward, tends to increase. Stocks have been held down, making for a healthier condition than broadsilks have enjoyed at any time this year. Given continued curtailment, the chances for profit in the concluding quarter are good.

▸New Woven Bedspread Line by Monument Mills

Monument Mills, Housatonic, Mass., announce a new construction in their line of Francette woven cotton bedspreads. This results from a special loom set-up required to reproduce the flowing, rhythmic design inspired by a French period brocade.

The spread is reversible, is preshrunk, and is made in pastel colors that are guaranteed to be fast to sun and repeated launderings. Sizes are 72 x 105 in. and 90 x 105 in. The spread is priced to retail at $3.50 to $3.75.

KNIT GOODS MARKET

TEXTILE WORLD ANALYST

◆Underwear Mills Await Reorders

INITIAL heavyweight underwear business this season has been well below other years and there is doubt as to whether reorders will be substantial enough to make up for the difference. The past ten days have been quiet in this market due partly to the weather and partly to the holiday. All advance business for September has been shipped and few mills have any real quantity of October orders for heavyweights on their books. The agents hope that next Monday will mark the turn. Initial coverage by distributors was so light that a brief spell of cool weather would soon bring them into the market with reorders, it is believed.

The decline in ribbed underwear demand is sending more and more companies into auxiliary lines. One firm which recently began making a line of bathing-suits this week brought forth a range of knitted rayon pajamas and reported a good initial business on the offering. Lightweight underwear lines still move fairly well and agents hope for a steady activity at that end well into the cool weather.

Price tone on winter weight underwear continues firm and distributors seem reconciled to the prospect of price maintenance for the rest of the season. A heavy end-season stock would be a main influence in bringing a cut and with stocks at their present low level any abundant carryover is unlikely.

◆First 1932 Swimsuit Lines Are Shown

SEVERAL important swimsuit mills showed their 1932 offerings this week but it will be another ten days probably before all lines are available. The prices announced are not sufficient to indicate market levels; they suggest a downward revision on certain popular-priced lines but it seems likely that the better quality suits will hold the same levels as this year. Whatever lowering develops will be resisted, as the margin of profit already is meager. The new styles give a leading position to the suspender suit for men which made its initial appearance this season and was well received. There is a wide variety of design and color in women's sunbacks; pastels still hold a good place but dark shades are more important than previously.

Heavyweight sweaters are selling spiritedly and mills find considerable difficulty in shipping prior to mid-October. The cautious production policy which has been followed and the backward buying have precipitated a seller's market. It is clear, however, that this congestion is going to cut heavily into the total turnover on these sweaters. Agents enjoy a profitable business on the stocks they sell but they do not expect to sell as many sweaters as last year. Dark colors continue the chief preference of distributors; pullovers are in good call.

◆Standard Hosiery Sold as Inferior?

WOMEN'S full-fashioned hosiery movement which suffered its usual slackening due to the holiday period has not yet picked up, but mill agents look for improvement within ten days. The outlook is fairly promising. Neither distributors nor retailers have much fall stock on hand and a few days of brisk weather will clear their shelves, encouraging reorders, it is believed.

Available quantities of distress stocks while less than they were in spring are still a vexing problem. Mill agents are continually hearing of stocks procurable at below-market prices and while some of this talk may be inspired by buyers, there is no question but that distress goods are holding back market progress. Agents also express the belief that some of the standard full-fashioned hosiery surplus is being sold as inferior at reduced prices.

Full-fashioned price levels are not too firm but a pick-up in demand could redeem this weakness and the agents hope for a steadying later in the month when the reorders are expected to come in actively.

No Improvement in Half Hose

The heavier weight hosiery numbers are in good call. These lines showed early movement and some mills have most of their rayon-and-wool hosiery business for the season already on the books. Prices at this end are firm and afford a fair margin.

The half-hose situation shows no improvement. Demand has waned somewhat and is even more of a price proposition than before the holiday. All orders are small and for spot shipment. The trend to quality which was evident for a brief period in August has waned and now demand is largely for the very cheapest grades of men's hosiery. Mill agents find trouble in selling even their 35c. lines, the preference being for numbers retailing at 25c. and less. A few mills offering carefully styled novelty half-hose to retail at 50c. are doing business but these are the exceptions; quality half-hose generally is slow.

◆Raw Cotton Report

(continued from page 47)

Sept. 1 report included a preliminary estimate of abandonment which it placed at only 1.5%, leaving an indicated acreage for harvest of 40,889,000.

The report of the Census Bureau shows ginnings of only 565,160 bales prior to Sept. 1 compared with 1,879,919 last year. The weather since the beginning of September has been more favorable for rapid opening of cotton and there has been some increase of activity in picking, but the crop is still being picked slowly or comparatively so, and there are many reports of holding. The low level of prices seems to discourage the employment of pickers and in many sections farmers are picking their own cotton; in others the prices being paid for pickers does not seem to attract a sufficient number. Reports of cotton held in the seed are coming in more frequently, while there are also reports that some southern merchants are preparing to hold their accumulated purchases this season without the protection of a futures hedge because of the low prices, particularly in the case of the low grades. No doubt, hedging will increase in volume as picking becomes more general and perhaps farmers will show more disposition to sell freely once the question of laws to reduce acreage has been settled in the various State legislatures. Nevertheless, it looks now as if the volume of hedging during the early season will fall short of expectations and if this should be combined with low prices in world demand for cotton goods, a more cheerful view of the market might easily develop.

◆Dull Demand for Cotton Wastes

DEMAND for cotton waste continues hand-to-mouth and prices are largely nominal. A greater volume of business could undoubtedly be done if dealers were willing to meet offers. These offers are based on current cotton values, and in the main would represent losses to dealers if accepted. Dealers still have quantities of waste on their hands which were acquired on contracts based on higher cotton values.

An encouraging aspect of the situation is the fact that stocks of good wastes are not over-burdensome, nor is there likely to be any large accumulation while cotton mills continue their present policy of curtailed operations. Woolen mills are showing greater activity and if this improvement continues demand from these large users of cotton waste will pick up materially.

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

◆ Apponaug Co. Shows Profit

THE Apponaug (R. I.) Co., cotton finishing, reports for the fiscal year ended June 30, 1931, net profit of $616,786 after charges and Federal taxes, which compares with net profit of $854,590 in the previous year, and net profit of $701,076 in the year ended June 29, 1929. The balance sheet of the company at the close of the last fiscal year shows current assets of $1,927,553, and current liabilities of $171,709, leaving working capital of $1,755,843, as compared with working capital of $1,565,195 on June 30, 1930. Surplus account increased $459,245 during the year, or from $1,596,702 to $2,055,947.

Botany Worsted Deficit

Botany Consolidated Mills Inc., and its subsidiary, Botany Worsted Mills, Passaic, N. J., report for the six months ended June 30, 1931, operating loss of $1,488,647, including $721,503 for inventory adjustments and idleness. Total deficit after depreciation, interest, and other charges amounted to $1,898,456, which compares with total deficit of $1,850,430 in the first half of 1930. For the full year ended Dec. 31, 1930, there was a deficit of $3,044,149.

Boott Dividend Reduced

On Sept. 1 Boott Mills, cotton goods, Lowell, Mass., paid a quarterly dividend of $2 per share, thereby reducing the annual dividend rate from $12 to $8. In 1930 the company reported a net loss of $459,563, which was the first time since its organization in 1905 that the company failed to show a profit.

Celanese Output Rises

The volume of business in pounds of Celanese yarn for the first eight months of 1931 was over 50% in excess of the corresponding period of 1930, it was reported this week at the regular meeting of the board of directors of the Celanese Corp. of America.

Current earnings of the company continue at approximately the same rate as in the first half of this year it was indicated. The board of directors declared the regular quarterly dividend of 1¾% on the 7% cumulative series prior preferred stocks, payable Oct. 1, to holders of record Sept. 18.

Reductions in Taxable Valuations

Lawrence, Mass., textile mills, four in number have received the following reduction in taxable valuation, namely: the American Woolen Co., $2,000,000; Pacific Mills, $1,750,000; Arlington Mills, $400,000; and the Kunhardt Mills, $45,000. The cuts, though large, are much below what was asked. Mayor Michael A. Landers believes the textile companies have been treated fairly and feels the reductions are too large. They mean an increase of $1 in tax rate.

Sizeable reductions in valuations on mill property are to be noted in the Cumberland (R. I.) tax figures for this year, released last week. Outstanding in the reductions is that of the valuation of the Sayles Finishing Plants, Inc., which was dropped from $150,500 to $75,250. The textile plant had instituted suit against the town on the grounds of overassessment last year. The case is still pending.

The Lonsdale Co.'s valuation was reduced $279,981, from $3,296,200 in 1930 to $3,016,219 this year. Despite this reduction, the textile concern will pay more taxes this year because of the rise in the tax rate from $1.90 to $2.25.

Newport (N. Y.) Textile Co., has secured a reduction of $4,000 on the assessed valuation of its property following a protest filed with that municipality.

Standard Bleachery & Printing Co., East Rutherford, N. J., has secured a reduction in its property assessment of the Bergen County Board of Taxation from $250,000 to $200.000.

Arcadia Mills, Spartanburg, S. C., have arranged for an increase in capital to $1,600,000.

Del Rio (Tex.) Wool & Mohair Co., has arranged for an increase in capital stock from $100,000 to $250,000.

▸ New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Sale	Bid	Asked
Am. Mfg. Co., pfd	41	40	45
Amoskeag	8	..	..
Arlington	25½	25	27
Associated Textile	10	10	15
Bates	60	44	49
Berkshire Associates, com	12½	5½	6½
Berkshire Associates, pfd	40½	23	26
Bigelow-Sanford, com	30½	..	..
Boott Mills	120½	60	80
Edwards	80½	44	48
Esmond, pfd	98	95	99
Farr Alpaca	35½	38	41
Hamilton Woolen	40	55	..
Hill	7	6	9
Indian Orchard	10	..	10
Ludlow	105½	104	107
Merrimack, com	35	10	15
Nashua, com	7½	7	10
Nashua, pfd	29	28	33
Naumkeag	65	60	66
Newmarket	16½	11	15
Otis	45	42	47
Pacific	17	..	..
Pepperel	66½	65	68
Plymouth Cordage	63	65	68
York	8¾	5½	8

▸ New Bedford Mill Stocks

(Sanford & Kelley, New Bedford)

	Bid	Asked
Acushnet Mill	1	2
Associated Textile	..	8
Associated Textile, 6% pfd	..	10
Beacon Mfg., com	95	..
Beacon Mfg., pfd	76	79
Booth Mfg. Co., com	5	7
Booth Mfg. Co., pfd	23	25
City Mfg. Co	5	..
Dartmouth Mfg. Co., com	24	..
Dartmouth Mfg. Co., pfd	78	..
General Cotton Co	1	1½
Gosnold Mill, com	13½	15
Gosnold Mill, pfd	40	..
Gosnold Mill Notes	89	94
Grinnell Mfg. Co	28	30
Hathaway Mfg. Co	31	..
Holmes Mfg. Co., pfd	3¼	4
Kilburn Mill	8½	10
Nashawena Mills	15	16½
Neild Mill	18	19
Nonquitt Mills	2	2¾
Pierce Mill	72½	..
Potomska Mills	36½	37½
Quissett Mills, com	33	35
Soule Mill	50	52
Taber Mill	5	6
Wamsutta Mills	8	9½

▸ Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Sept. 8:

	High	Low	Last Sale	Net Ch'g
Adams Millis	32½	31¼	31	—1⅜
American Woolen	7⅛	6⅛	6⅛	—1⅛
American Woolen, pfd	34	30⅛	31⅛	—2⅛
Belding-Heminway	6	5½	6	...
Botany Mills, A	2½	2	2	—⅛
Cannon Mills	21½	21½	21½	—⅜
Century Ribbon	8⅛	6	6½	—1½
Collins & Aikman	13⅜	12½	12½	—1⅛
Consolidated Textile	⅜	⅛	⅛	—¼
Durham Hosiery, pfd	21	21	21	....
Gotham Hosiery	8½	8⅛	8½	—⅛
Industrial Rayon	33½	30½	30½	—2½
Kayser, Julius	13½	12½	12⅝	—1⅜
Kendall, pfd	51	51	51	—2
Mallison	1⅜	1⅛	1⅛	....
Mohawk Carpet	13½	12	12	—1½
Munsingwear	17	17	17	+⅛
*Powdrell & Alexander	33	33	33	+1
Real Silk Hosiery	6½	5⅛	5⅛	—1½
*Tubize	5	4½	4½	—½
United Piece Dye Works	18	16½	16½	—1½

* Listed on Curb.

▸ Southern Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Asked
Acme Spinning Co	43	55
American Yarn & Processing Co	35	45
Chadwick-Hoskins Co. (Par $25)	5	8
Chadwick-Hoskins Co., 8%, pfd	79	82
Crescent Spinning Co	40	47
Durham Hosiery, 6%, pfd	18	23
Erwin Cotton Mills Co., 6%, pfd	85	90
Flint Mfg. Co	..	57
Flint Mfg. Co., 7%, pfd	84	90
Hanes, P. H. Knitting Co	6	10
Hanes, P. H. Knitting Co., 7%, pfd	78	91
Linford Mills	40	51
Perfection Spinning Co	43	60
Roanoke Mills, 1st pfd., 7%	40	48
Rosemary Mfg. Co., pfd., 7%	71	..
Stowe Spinning Co	40	50
Ware Shoals Mfg. Co	..	90
Ware Shoals Mfg. Co., 7%, pfd	80	85
Winget Yarn Mills Co	..	42
Wicasset Mills Co	115	135

(A. M. Law & Co., Spartanburg, S. C.)

Avondale Mills, Ala	525	650
Bibb Mfg. Co	84	88
Clifton Mfg. Co	..	70
D. E. Converse Co	..	60
Dunean Mills	70	85
Dunean Mills, pfd	94	96
Gossett Mills	..	30
Hunter Mfg. & Com. Co., pfd	72	77
Judson Mills, A pfd	83	86
Judson Mills, B pfd	79	83
Monarch Mills	70	75
Newberry Cotton Mills	..	75
Orr Cotton Mills	35	40
Pacolet Mfg. Co	..	40
Piedmont Mfg. Co	..	65
Riverside & Dan River Mills (Par $25)	7	9
Riverside & Dan River Mills (6%, pfd.	54	58
Southern Bleachery & Print Works, pfd	..	40
Spartan Mills	..	95
Union-Buffalo Mills, 1st pfd	..	50
Victor-Monaghan Co	40	42

QUOTATIONS

at close of business, Sept. 9, 1931

Prices cover average qualities unless otherwise stated

Cotton Goods

	Sept. 9	Sept. 2	Sept. 10, 1930
PRINT CLOTHS			
27-in., 64x60, 7.60	2¼c.	2¼c.	4 –4¼c.
38½-in., 64x60, 5.35	4¼c.	4¼c.	5½c.
39-in., 68x72, 4.75	4¼c.	4¼c.	6¾c!
39-in., 72x76, 4.25	5¼c.	5¾c.	6⅜–6½c.
39-in., 80x80, 4.00	5½c.	5¾c.	7¼c.
BROWN SHEETING			
36-in., 56x60, 4.00	4⅝c.	4⅝c.	6½c.
36-in., 48x48, 3.00	4¼c.	5 c.	7¼–7½c.
37-in., 48x48, 4.00	4¼c.	4¼c.	5¼c
PAJAMA CHECKS			
36½-in., 72x80, 4.70	5¼c.	5¼c.	6 c.
36½-in., 64x60, 5.75	4¼c.	4¼c.	5 c.
MISCELLANEOUS			
Drills, 37-in., 3 yd.	5½c.	5⅜ c.	7½c.
Denims, 2.20	9½c.	11 c.	12½c.
Tickings, 8 oz.	14 c.	14 c.	16 c.
Standard prints	7 c.	7 c.	8 c.
Eastern staple ginghams, 27-in.	7½c.	7¼c.	10 c.

Cotton Waste

(Prices Nominal)

Peeler comber	5½– 6
Peeler strips	5½– 6
Sak. comber	5½– 5¾
Choice willowed fly	2½– 3
Choice willowed picker	2 – 3
Sak. strips	6½– 7
Linters (mill run)	1½– 2⅜
White spooler (single)	5 – 5¼

Cotton Yarn

CARDED (Average Quality)

Double Carded 2c.—4c. higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.15	22s	$0.18½– .19
10s	.15	24s	– .19½
12s	– .15½	26s	– .20½
16s	– .16½	30s	– .22
20s	– .17	40s ex. qual.	.32½– .33½

TWO-PLY SKEINS AND TUBES

8s-2	$0.15	26s-2	$0.20½
10s-2	– .15½	30s-2	– .21½
12s-2	– .16	36s-2	– .28
14s-2	– .16½	40s-2	.29 – .30
16s-2	– .17	40s-hi.brk.	.32 – .33
20s-2	– .17	50s-2	– .37
24s-2	– .19½	60s-2	– .42

SINGLE WARPS

10s	$0.15 – .15½	24s	$0.19
12s	– .15½	26s	– .20
14s	– .15½	30s	– .22
16s	– .16	40s ex. qual.	– .33½
20s	– .17		

TWO-PLY WARPS

8s-2	$0.15	24s-2	$0.19
10s-2	.15 – .15½	26s-2	– .20
12s-2	.15½	30s-2	– .21
14s-2	.15½– .16	40s-2 ordin.	– .29
16s-2	.16 – .16½	50s-2	– .37
20s-2	.16½– .17	60s-2	– .42

8s-2 and 4-ply skeins and tubes; tinged, 14; white, 15; waste, 13

HOSIERY CONES (Frame Spun)

8s	$0.14½	22s	$0.18 – .18½
10s	.14½– .15	24s	.19 – .19½
12s	– .15	26s	– .20
14s	– .15½	30s tying	.20½– .21
16s	– .16	30s reg.	.22 – .22½
18s	.16½– .17	30s ex. qual.	.24 – .25
20s	.17 – .17½	40s	.29 – .30

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.28 – .30	60s-2	$0.48 – .49
30s-2	.33 – .33½	73s-2	.58 – .60
36s-2	.35 – .35½	80s-2	.68 – .70
40s-2	.37½– .38	90s-2	90 – .95
50s-2	.43 – .44	100s-2	1.08 –1.12

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.30 – .31	60s-2	$0.49 – .50
30s-2	.33 – .34	70s-2	.61 – .62
36s-2	.36½– .37	80s-2	.70 – .72
40s-2	.38 – .39	90s-2	– .95
50s-2	.44 – .45	100s-2	1.12 –1.15

SINGLES

12s	– $0.22½	30s	$0.31 – .32
14s	– .23	38s	.35 – .35½
16s	– .23½	40s	– .36
18s	– .24	50s	– .40
20s	– .25	60s	.47 – .48
24s	.28 – .28½	70s	.57 – .58
28s	.30 – .30½	80s	.66 – .68

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.45 – .47	90s-2	$1.18 –1.23
30s-2	.48 – .50	100s-2	1.48 –1.53
36s-2	.50 – .52	120s-2	1.88– 1.93
40s-2	.52 – .54	30s-2	– .59
45s-2	.54 – .56	40s-2	– .63
50s-2	.56 – .58	50c	.68 – .70
60s-2	.62 – .64	60s	– .78
70s-2	.75 – .77	70s	.88 – .90
80s-2	.87 – .88	80s	1.03 –1.08

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed Sept. 3	For Week High	For Week Low	Closed Sept. 9	Net Ch'ge
September	6.63	6.63	6.52	6.85	+0.22
October	6.75	6.84	6.50	6.97	+0.22
November	6.88	6.88	6.70	7.07	+0.19
December	6.98	7.06	6.87	7.17	+0.19
January	7.06	7.15	6.81	7.26	+0.20
February	7.15	7.15	7.06	7.37	+0.22
March	7.26	7.35	7.00	7.45	+0.19
April	7.33	7.33	7.24	7.54	+0.21
May	7.43	7.52	7.17	7.61	+0.18
June	7.50	7.50	7.41	7.69	+0.19
July	7.60	7.69	7.35	....	.....

SPOT FLUCTUATIONS FOR WEEK

(Middling)

	New York	New Orleans	Liverpool
Thursday, Sept. 3	6.80	6.53	3.73
Friday, Sept. 4	6.70	6.42	3.71
Saturday, Sept. 5	Holiday	Holiday	....
Monday, Sept. 7	Holiday	Holiday	3.69
Tuesday, Sept. 8	6.75	6.42	3.69
Wednesday, Sept. 9	6.90	6.64	3.64

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Sept. 8		Change
Nov. Sak	10.79	—0.33
Oct. uppers	7.72	—0.20

Sept.-Oct. Shipment c. i. f. Boston

(Tariff not included)

Fully good fair Sak	13.70
Fully good fair to good Uppers	10.50

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	17
Peruvian Pima No. 1	16½
Peruvian Moderate Rough	13
Peruvian Full Rough	17
China Tientsin No. 1	9¼
India Rough	7 to 9
India Smooth	7 to 9

(By Brun s-Norden an Co.)

MOVEMENT INTO SIGHT

	This Year	Last Year	Year Before Last
Week ended Sept. 4	176,000	346,000	356,000
Season	†458,000	1,110,000	909,000

†Corrected. †9,000 added.

WORLD VISIBLE SUPPLY

	Today	One Year Ago
Interior towns and ports of U. S.*	3,439,000	2,511,000
Afloat to and at ports of Europe	1,048,000	863,000
Afloat to and at ports of Orient	384,000	149,000
Total	4,871,000	3,523,000
Change during week	Increase	Increase
*Includes afloat to New York.	37,000	228,000

FORWARDINGS TO MILLS OF WORLD

	This Year Week	This Year Season	Last Year Week	Last Year Season
Northern States, U.S.	14,000	61,000	7,000	47,000
Southern States, U.S.	58,000	229,000	39,000	165,000
Total United States	72,000	290,000	46,000	212,000
Great Britain	13,000	83,000	11,000	70,000
Continent	40,000	212,000	51,000	277,000
Orient	12,000	†172,000	7,000	53,000
Canada and other America	2,000	10,000	3,000	12,000
Total Foreign	67,000	†477,000	72,000	412,000
World total	139,000	†767,000	118,000	624,000

†8,000 deducted Orient.

Exports from United States

Total	131,000	278,000	182,000	450,000

AVERAGE PRICE SEPT.-OCT. SHIPMENT HARD WESTERN COTTON

	F.o.b. New England Middling	St. Middling
1 1/16-in	8½–8¾c.	9½–9¾c.
1⅛-in	9½–9¾c.	10½–10¾c.
1 3/16-in	10¾–11¼c.	11¾–12¼c.
1¼-in	15 –16c.	17 –18c.

Basis on New York, October, 6.66.

SPOT FLUCTUATIONS AND STOCKS

Markets	Middling Sept. 2	Middling Sept. 9	Stocks Sales	Stocks This Week	Stocks This Year
Galveston	6.65	6.70	635	395,589	228,943
New Orleans	6.53	6.64	3,513	518,282	330,743
Mobile	5.85	6.15	307	197,425	20,204
Savannah	6.28	6.42	1,421	352,216	179,854
Norfolk	6.50	6.56	....	46,320	42,208
New York	6.85	6.90	1,884	228,695	236,923
Augusta	6.19	6.38	996	70,840	68,965
Memphis	5.80	5.85	2,447	78,963	129,507
St. Louis	6.35	6.15	.....	.....	1,808
Houston	6.55	6.65	51,985	691,768	693,264
Dallas	6.05	6.05	65,435	6,453	11,681

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M.F	.75†	1.00†	.75†	.75†	0.83†
S.G.M	.60†	.75†	.65†	.63†	.67†
G.M	.50†	.50†	.45†	.50†	.48†
S.M	.35†	.25†	.25†	.25†	.29†
S.L.M	.50*	.40*	.50*	.50*	.47*
L.M	1.00*	.90*	1.00*	1.00*	.97*
S.G.O.**	1.50*	1.25*	1.50*	1.50*	1.48*
G.O	2.00*	1.50*	2.00*	2.00*	1.98*

YELLOW TINGED

G.M	.40*	.35*	.50*	.50*	0.46*
S.M	.65*	.60*	.75*	.75*	0.70*
M.**	1.00*	.75*	1.00*	1.00*	.99*
S.L.M	1.50*	1.25*	1.50*	1.50*	1.52*
L.M	2.00*	1.50*	2.00*	2.00*	1.97*

YELLOW STAINED

G.M.**	1.00*	1.00*	1.00*	1.00*	1.03*
S.M.**	1.50*	1.25*	1.50*	1.50*	1.48*
M.**	2.00*	1.50*	2.00*	2.00*	1.93*

BLUE STAINED

**Grades not deliverable on contract. †On Middling. *Off Middling.

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne	$0.25 – $0.26½	¾ blood	$0.23½ – $0.24½
Fine clthg	.21 – .22	½ blood	.22 – .23
¼ blood	.24 – .25		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.58 – $0.60
California, Northern	.50 – .52

PULLED—EASTERN (CLEAN BASIS)

A.A.	$0.62 – $0.65	B-Super	$0.46 – $0.48
A-Super	.50 – .53	C-Super	.41 – .43

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.61 – $0.63
Staple ¾ bld	.57 – .59
Fine and fine medium	.56 – .59
¾ blood	.50 – .52
½ blood	.45 – .48

MOHAIR—DOMESTIC

Best carding	$0.23 – $0.25
Best combing	.31 – .33

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.17 – $0.20
Cape firsts	.18 – .21

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.53 – $0.55
64s	.46 – .48
58s-60s	.41 – .43

(IN GREASE)

Montevideo:	
58s-60s	$0.19 – $0.20
56s	.19 – .20
50s	.16 – .17
Buenos Aires:	
4s, 40-44s	$0.14 – $0.15
5s, 36-40s	.12 – .14

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.22 – $0.24
China: Combing No. 1	.13 – .14
China Filling Fleece	.12 – .14
Szechuen ass't	.12 – .14
Cordova	.14 – .15
Scotch black face	.15 – .17
East India: Kandahar	.17 – .19
Vican'r	.23 – .25
Joria	.23 – .24

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.75 – 0.77½
2-24s 40s	.... – .85
2-26s 44s	.87½ – .90
2-28s 46s	.92½ – .95
2-30s 48s	.95 – .97½
2-32s 50s	.97½ – 1.00
2-30s, 64s fancy mixes	1.37½ – 1.45

(Single yarns 5c. less than above)

2-36s, 58s	$1.17½ – 1.20
2-40s, 50s	.... – 1.20
2-40s, 64s	1.35 – 1.37½
2-50s, 66s	1.40 – 1.45
2-60s, 70s	1.82½ – 1.85

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.75 – 0.77½
2-20s, 48s in oil	.... – .80
2-20s, 50s in oil	.80 – .82½
2-20s, 56s in oil	.90 – .92½
2-20s, 60s in oil	1.10 – 1.12½
2-20s, 64s in oil	1.20 – 1.25
1-18s, 48s dyed	.95 – .97½
1-18s, 50s dyed	.95 – .97½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.05 – 1.07½
1-20s, 60s	1.10 – 1.12½
1-18s, 64s, dyed	1.32½ – 1.35
1-26s, 64s	1.10 – 1.12½
1-30s, 60s, Warp	1.20 – 1.22½
1-30s, 64s, Warp	1.22½ – 1.25
2-30s, 64s, Fancy mixes	1.45 – 1.47½
2-40s, 64s, Zephyrs	1.35 – 1.40
1-50s, 66s	1.47½ – 1.52½
2-50s, 66s	1.50 – 1.55
1-60s, 70s	1.85 – 1.87½
2-60s, 70s	1.90 – 1.95

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$ .95 – 1.00
1-40s, 50-50-60s on cops	1.10 – 1.15
1-40s, 50-50-64s on cops	1.12½ – 1.15
1-40s, 50-50-64s Australian cops	1.20 – 1.25

Underwear mixes, 3 to 5c., Solid color, 35c. additional.

New York Top Futures

	Closed Sept. 2	For the Week High	Low	Closed Sept. 8	Net Chge.
September	77.00	77.00	72.00	76.00	—1.00
October	73.00	73.00	71.00	71.00	—2.00
November	73.00	73.00	70.50	70.50	—1.50
December	72.00	72.30	70.50	70.50	—0.50
January	72.00	72.20	70.00	70.00	—2.00
February	72.00	72.00	70.00	70.00	—2.00
March	72.00	72.00	70.00	70.00	—2.00
April	72.00	72.00	70.00	70.00	—2.00
May	71.50	72.00	70.00	70.00	—1.50
June	71.50	71.50	70.00	70.00	—1.50
July	71.50	71.50	70.00	70.00	—1.50
August	71.50	71.50	70.00	70.00	—1.50

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.83 – $0.85
Half-blood (60-62s)	.78 – .80
High ¾ blood (58s)	.70 – .72
Aver. ¾ blood (56s)	.63 – .65
Low ¾ blood	.60 – .62
High ½ blood (50s)	.53 – .55
46s S. A. and N. Z.	.51 – .53
44s S. A. and N. Z.	.50 – .52
40s S. A. and N. Z.	.48 – .50

TOPS—BRADFORD, ENG. (SEPT. 5)

Fine (70s)	25 d	¾ bld. (56s)	15½d
Fine (64s)	22 d	½ bld. (50s)	12 d
¾ bld. (60s)	20 d	Cross-bred (46s)	9½d
¾ bld. (58s)	17½d		

NOILS—BOSTON

Fine	$0.37 – $0.40	High ½ bld	$0.30 – $0.31
Half-bld	.35 – .37	Low noils	.25 – .28
Aver. ¾ bld	.34 – .35	Medium colored	.23 – .25
Fine colored	.31 – .33		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.60 – $0.63
Lap, fine colored	.46 – .50
Hard ends, fine white	.48 – .52
Hard ends, ½ blood white	.33 – .35
Hard ends, fine colored	.22 – .25
Hard ends, medium colored	.15 – .18
Card, fine white	.22 – .25
Burr, fine Carbonizing	.27 – .30

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.05 – $0.05½
Merinos, Fine Dark	.03½ – .04
Merinos, Fine Light	.10½ – .11
Serges, Blue	.05½ – .06
Serges, Black	.05½ – .06
Serges, Red	.08 – .09
Knit, White	.21 – .22
Knit, red	.10½ – .11
Knit, Light Hoods	.11½ – .12½
Worsted, Light	.05 – .05½
Worsted, Blue	.05½ – .06
Worsted, Black	.06 – .06½

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. spec. gd. XX. sk. 85%.	$3.85
Japan organzine 2 thd. grand sk. 83%	3.70
Japan organzine, 2 thd. sp. crack. sk. 81%	3.60
Japan crepe, 3 thd. gd. XX bob. 83%	3.65
Japan crepe, 3 thd. sp. crack. bob. 81%	3.55
Japan grenadine, 4 thd. sp. grand singles, 87%	4.95
Japan grenadine 3 thd. 90%	5.75
Canton crepe, 3 and 4 thd. 14/16 on bobbins	2.55
Hosiery tram, 3 thd. Japan 90%	4.75
Hosiery tram, 5 thd. Japan, 85%	3.60
Hosiery tram, crack XX 78%	3.25

SPUN SILK YARNS (Terms: net 30)

40/2	$3.10	60/2	$3.45
54/2	3.30	62/1	2.35

Raw Silk

(60 Day Terms. Spot Goods.)

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 87%	$3.15	$2.70	$2.50
Special Grand, 85%	2.95	2.60	2.45
Grand XX, 83%	2.80	2.55	2.40
Special Crack, 81%	2.70	2.55	2.40
Crack XX, 78%	2.60	2.50	2.35
Extra Extra, 73%	2.55	....	....
Best Extra, 68%	2.50	....	....

Canton filature, new style, 14/16	$1.85
Canton filature, new style, 20/22	1.77
Tussah filature, 8 cocoon	1.05

NATIONAL RAW SILK EXCHANGE

	Close Sept. 2	For the Week High	Low	Close Sept. 8	Net Ch'ge.
September	2.38	2.40	2.36	2.42	+ .04
October	2.37	2.38	2.34	2.40	+ .07
November	2.36	2.37	2.33	2.37	+ .01
December	2.35	2.36	2.32	2.36	+ .01
January	2.35	2.35	2.32	2.37	+ .02
February	2.35	2.35	2.31	2.37	+ .02
March	2.35	2.35	2.31	2.37	+ .02
April	2.33	2.35	2.31	2.36	+ .03

Total number of bales, 4,920. Total approximate value, $1,441,336. Trading unit crack XX 13/15 white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18-30	1.35	1.25
100	18-40	1.10	1.00
125	36-50	1.00	.90
150	30	.70	.67
150	24-40	.75	.72
150	60	.85	.82
150	75-90	.85	.82
170	24-27	.75	.72
170	60	.85	.82
200	30	.75	.72
200	35-42	.75	.72
300	42-62	.63	.60
450	54-60	.63	.60
600	72-96	.63	.60
900	100-144	.63	.60

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0.72
100	1.05	.95	175	.75	.72
125	.95	85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	65	45	$2.00
25	24	2.85	80	60	1.70
30	24	2.60	100	75	1.35
40	30	2.40	120	90	1.22
52	30	2.20	150	112	1.10
			180	135	.97

ACETATE PROCESS

Denier	Price	Denier	Price
45	$1.60–2.25	120–125	$1.10–1.90
55–60	1.50–2.05	140	1.30
65	2.45	150	1.00–1.40
75	1.40–1.80	200	1.55
100	1.30–1.65	300	1.00–1.50

Rayon Waste

Open bleached waste	$0.13 – $0.14
Open unbleached waste	.10½
Bleached thread waste (mfs.)	.09
Bleached thread waste (misc.)	.06 – .07
Colored thread waste	.03 – .04
Colored clips	.03 – .04

CONVERTED RAYON WASTE

Bleached tops	$0.30 – 0.32½
Unbleached tops	.28 – .29
Bleached noils	.11
Unbleached noils	.09½
Bleached garnetts	.12
Unbleached garnetts	.13
Colored garnetts	.10 – .11

Silk Waste

Kibizzo Kakai Grand XX	$0.50
Kibizzo Kakai Triple Extra	.44
Frison Grand Double	.49
Pierced Cocoons	.50

Distributors Impressed by Opportunity in Low-Priced Cotton

BELIEVING that the cotton textile mills in cooperation with their distributors in all sections of the United States now have an unparalleled opportunity to give powerful assistance to business and employment generally, George A. Sloan, president of the Cotton-Textile Institute, communicated over last week-end with some of the largest retail and wholesale merchants in the country to determine the possibility of stimulating a buying movement during the approaching fall and winter.

Mr. Sloan telegraphed: "Today's prices cotton textiles based on lowest cotton prices in this century. Stocks of cotton goods at lowest point since latter part of 1927." He went on to remind these distributors of the far-reaching significance in increasing the demand for cotton goods. He stated: "With active cooperation of merchants in promptly anticipating their stock requirement this plan should develop into general business improvement with direct benefits to 12,000,000 people who are dependent upon cotton growing and manufacturing. Resulting increased purchasing power of farm and mill communities is obvious."

Early responses to this message received at the Cotton-Textile Institute clearly indicate a recognition in many important quarters of the unusual opportunities at the present time and a willingness to cooperate in taking advantage of them.

In these responses, such statements as the following were made: "We feel that the present prices of cotton goods are so low that we have placed orders for our requirements which we believe should be at least normal this fall." . . . "We have placed substantial orders for cotton goods for fall selling." . . . . "Very much in accord with your idea of stimulating buying of cotton textiles." . . . . "We will be prepared to purchase $1,000,000 worth of cotton goods above our usual requirements for big promotion at end of September providing manufacturers will present merchandise at prices enabling us to make the event a success." . . . . "Our company is glad to cooperate with the Cotton-Textile Institute and you in your efforts to stimulate business in one of the great industries of the country."

Among the distributors heard from were Gimbel Bros., Inc., Carson, Pirie Scott & Co., Wm. Filene Sons' Co., The Fair, Associated Dry Goods Corp., The Grant Co. and many others.

▸ Chairman Appointed For Georgia Executives Meeting

The fall meeting of the Textile Operating Executives of Georgia will be held on Friday, Sept. 25, at the Georgia School of Technology, Atlanta, Ga., as noted in these columns last week.

George S. Elliott, superintendent, Pacolet Mfg. Co., New Holland, Ga., will lead the slashing discussion, and Frank K. Petrea, superintendent, Swift Mfg. Co., Columbus, Ga., who is general chairman of the organization, will conduct the session on weaving. P. L. Lindsey, master mechanic, Exposition Cotton Mills, Atlanta, will be in charge of the mechanical discussion which is designed for the mill master mechanics and engineers.

E. H. Rogers, agent, Fulton Bag & Cotton Mills, Atlanta, is vice-general chairman of the organization, and Robert W. Philip, editor of *Cotton*, is secretary and treasurer. The executive committee members are: Albert Lehmann, Jr., superintendent, Dixie Cotton Mills, LaGrange; George W. Murphy, superintendent, Columbus (Ga.) Mfg. Co.; D. D. Towers, superintendent, Anchor Duck Mills, Rome; A. E. Massey, superintendent, Exposition Cotton Mills; and George S. Elliott, superintendent, Pacolet Mfg. Co., New Holland.

Business News

Silk Laboratory Moves

The Silk Grading & Testing Laboratory, Inc., has removed its laboratory to 22 West 26th Street, New York.

National Acme to Make Bolts and Nuts on Dardelet Principle

The National Acme Co., of Cleveland, Ohio, and Windsor, Vt., has entered into a license agreement with the Dardelet Threadlock Corp. 120 Broadway, New York, to manufacture, use, and sell bolts, nuts, and screw machine products threaded with the Dardelet self-locking screw thread.

Leavitt Acquires Swendeman

The Leavitt Machine Co., Orange, Mass., has purchased the separator business from the Swendeman Corp., Boston, Mass., and will carry on the manufacturing and selling of the Swendeman separators and drains for compressed air lines. Mr. Swendeman becomes associated with the Leavitt Machine Co.

Magnesium Metal Prices Reduced

Substantially reduced prices on magnesium metal have been announced by the Dow Chemical Co., Midland, Mich. The new prices are 30c. per pound in carload lots and 32c. per pound in less than carload lots. This last reduction climaxes a period of 16 years of successful manufacturing. The average price for magnesium metal for 1915 as reported by the Bureau of Mines was $5 per pound.

Procter & Gamble Pushing Expansion Program

The Procter & Gamble organization is taking advantage of the present to develop its business. It is stated that the P. & G. advertising appropriations are larger than ever. Millions are also being invested in new plants located at strategic points to reduce distribution costs. The Baltimore unit, opened late last year, cuts costs for the Atlantic seaboard. The enlarged Kirk plants, in Chicago, serve the Middle West. Cotton oil plants at Portsmouth Va., acquired this spring, are being enlarged, will make the company's complete line of edible products using oil from 15 P. & G. crushing mills in Southern States. Now a California plant is being opened at Long Beach; it began making Crisco in July, by October will be producing a full line of soap products.

▸ Nine Silk Mills Settle

Complete settlement of the silk strike in the Paterson, N. J., district now in its sixth week, loomed nearer this week with the announcement that nine more jacquard silk mills have reached a compromise with the Associated Silk Workers and United Textile Workers.

▸ Bemberg Style Show

Fall and winter garment models of Bemberg fabrics created by Paris designers will be shown at a style show to be held by the American Bemberg Corp., Wednesday afternoon and evening, Sept. 16, in the Theater Moderne, Chanin Building, New York. The show is being arranged by Mrs. Louise Huston, director of the Educational Service Bureau of the company.

▸ 35-50% Wage Cut in Hosiery Mills Projected

Much conflict and secrecy marked reports emanating from the convention of the American Federation of Full-Fashioned Hosiery Workers held recently in Philadelphia to draft a new wage agreement with the Full-Fashioned Hosiery Manufacturers of America. The main issue is whether the union will accept a cut of 35 to 50% in organized mills, with the aim of bringing wages to levels below those in non-union mills thus forcing the latter to cut their scale. The reasoning credited to union officials who favor the plan, is that if non-union mills cut wages much further they will compel workers to rebel, thus scoring a point for labor.

When the federation first put the wage cut plan to a vote, the project was defeated by workers' representatives. However, subsequent action was taken at the convention by which it was decided to recommend to union members a stabilization program providing for a wage reduction of a temporary character of from 35 to 50%. It is considered by some manufacturers that there is a possibility that this resolution will be rejected by the knitters when it is submitted to the various unions for action. The action of the convention is to be brought before the organization of manufacturers for consideration. Until that action is taken it is stated no definite statement as to details will be forthcoming.

However, it is reported the wage cut calls for a reduction of 45% for footers, 35% for leggers and 30% for toppers. It is also understood the agreement calls for the return to the 1929 wage scale at

the end of a year if conditions permit, and also provides for the check-off system by giving the representatives of the union access to manufacturers' books. It is expected that it will require two weeks before reports are heard of the action taken on the proposed agreement by the various unions. It is also predicted that objection to the plan giving union officers access to companies' books will be voiced by manufacturers.

Provision for an arbitration clause in any agreement made by the federation was set forth in one resolution adopted at the convention. It was argued that such a condition would tend to stabilize trade and working conditions, and also improve the relations between the workers and the manufacturers. Furthermore, it was pointed out that losses as a result of strikes were apt to be far greater than those sustained because of an adverse decision by any arbitrator.

▸ Rayon and Cotton Course Offered at Columbia

Columbia University of New York City, Extension Teaching Dept., announces an evening lecture course on the manufacture, wearing and converting of rayon and other synthetic yarns and piece goods. The lectures are given by Herbert R. Mauersberger, formerly with the Celanese Corp. of America, and Cox, Fuller & Mauersberger.

The lectures will begin Sept. 24, and are held every Thursday evening from 7.30 to 9.20 p.m. at the university. The entire course consists of 15 lectures and may be repeated in the spring.

Columbia University also announces a comprehensive evening course of lectures on the spinning and weaving of cotton yarns and gray goods, given by Mr. Mauersberger.

The lectures will begin Sept. 25, and are held every Friday evening from 7.30 to 9.20 p.m. The entire course consists of 15 lectures and is followed by a course in cotton goods converting in the spring.

▸ Cannon's Towel Style Show

Cannon Mills will make their fall opening of towels with a formal style show at their New York office, 70 Worth Street, on Sept. 15.

▸ Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Sept. 5, based upon data compiled by the Department of Agriculture, follow:

	Week Ended Sept. 5	Total to Date 1931	Total to Date 1930
Domestic	8,456,000	221,494,000	221,749,000
Foreign	20,000	31,221,000	48,385,000
Total	8,476,000	252,715,000	270,134,000
IMPORTS AT PRINCIPAL PORTS			
Boston	20,000	31,221,000	48,385,000
Philadelphia	918,000	37,908,000	33,757,000
New York	350,000	35,539,000	31,326,000
Total	1,288,000	104,668,000	113,468,000

DuPont, Viscose Cut Acetate Prices; Other Firms Expected to Follow

A GENERAL lowering of cellulose acetate yarn prices by all producers was in prospect following an announcement this week by the Du Pont Rayon Co., of a reduction of from 32½ to 54c. per pound on all acetates. The cut does not affect orders placed prior to Wednesday for delivery within the 90-day guarantee period, but all business subsequent to that date will be taken at the new levels. The revision was not unexpected as the last year has seen much price-cutting of acetate yarns and official quotations were little more than nominal. The degree of the cut is a surprise, however, as few if any yarns had been selling at figures approaching the new prices.

The broader significance of the step is that it will aggravate the profitless business being done by the industry. Other producers who admitted they probably would follow suit, said the cut pared acetate profits down to an almost negligible point. In the phrase of one executive: "We are now at rock bottom; we cannot go any further, unless we are virtually to give it away."

The cut affects all the "Acele" yarns of the DuPont Co.'s acetate department. The company also adjusted the price guarantee on acetates to meet the separate needs of weavers and knitters. The guarantee now gives 90 days to weavers and 45 days to knitters, the difference being due to the fact that the knitter can effect a turnover in less time.

The Viscose Co., announced Thursday that it would meet the new levels; a similar move by Tubize Chatillon Corp., and Tennessee Eastman Corp., is expected. What action would be taken by the Celanese Corp., chief acetate yarn producer, was a matter of wide interest; this company refused to comment.

The statment by DuPont giving the new list follows:

"Under present conditions, far-sighted textile men look upon high quality acetate yarns as outstanding in fabrics of merit. Price stability being a definite asset to producers, Du Pont has revised prices on 'Acele' yarns, effective Sept. 9.

"With this assurance of price stability, you can proceed in all confidence with your plans for the use of Acele during the coming seasons.

Denier	Filaments	Twist	Skeins or Spools	Tinted Cones	6" Cops
45	13	6	1.60	....	....
60	18	6	1.50	1.65	....
75	24	5	1.40	1.55	....
100	32	4	1.30	1.45	....
100	32	2½	....	1.45	....
125	32	2½	1.10	1.25	1.20
150	24	4	1.00	1.15	....
150	24	2½	....	1.15	1.08
150	50	4	1.00	....	....
150	50	2½	....	....	1.08
300	100	4	1.00	....	....

"Acele sized on spools ready for the creel, also weaving cones with transfers. Prices on application.

"Prices quoted are F.O.B. point of shipment, freight allowed to freight house delivery point. Terms 2%—30 days. Price guarantee—90 days to the weaver; 45 days to the knitter.

More Confidence in Future

Reports from the South that the Ware Shoals Mfg. Co. is preparing to construct a plant additional at the expense of $125,000 add another to the list of textile mills which are taking advantage of present construction costs to improve their properties. It is understood that the addition is to the bleachery and finishing plant and that printing machines may be installed. J. E. Sirrine & Co. are the engineers and the Fiske-Carter Construction Co. is doing the building.

▸ Carolina Cooperative Council Begins 12th Year Sept. 22

The Carolina Cooperative Council, an organization composed of over 300 key men from the plants of the Carolina Cotton & Woolen Mills Co., will hold its first meeting for the year 1931-32 on Sept. 22, at Spray, N. C. Local men will be the speakers, new officers will be installed and a number of business matters handled.

The council is beginning with this September meeting its twelfth year as an organization. The speakers at the September meeting will be Luther H. Hodges, who served 10 years as council secretary; J. O. Thomas, present secretary; J. F. Meisamer; I. E. Hicks; W. J. Baughn and W. J. Arthur.

The new officers to be installed are S. T. Anderson, president; W. J. Baughn, vice-president and chairman of the program committee; J. O. Thomas, secretary; H. E. Wright, assistant secretary; L. W. Clark, E. E. Easley, L. M. Barksdale and H. W. Owen, committee chairmen. J. J. Shumate is the retiring president.

▸ Silk and Rayon Courses in New York High School

Textile High School, New York, announces the opening of the sixth year of its special day classes in silk and rayon merchandising and manufacturing. This course embraces training in manufacturing, buying and selling of silk and rayon yarns and fabrics, demonstrations of the machinery involved, textile calculations, and a general education in textile trade methods. This course will be given at the new Textile High School building recently erected and furnished with modern textile equipment at a cost of over $3,000,000. The principal of the school is Dr. William Dooley.

An Important Announcement

TO MEN RESPONSIBLE for WEAVING

Men have been using reeds for many years in weaving cloth, yet it has remained for research of the past decade to discover the possibilities of a reed made specially to fit the individual weave.

Research has discovered, for example, a way to free cloth from reed marks and uneven warp spacing; a way to reduce broken ends; a way to improve "cover" and improve the quality of the weave by *fitting* the reed to the weave. It has now made available a new Custom Made Reed—a reed made especially for the fabric you are weaving.

WHAT IT IS

This new reed is called Emmons Custom Made Reed. These reeds are made on Precision Machines, to your exact individual requirements.

If, for instance, you are weaving voiles and want strength of dent, you specify it. The Emmons Custom Made Reed will have all the strength of dent it is possible to build in.

Or you may be running broadcloth and need extra air space. Tell us and you will get air space up to 60%, soldered all the way across, if you want it.

There is one *best* reed construction for every fabric. You might as well get it. No stock or standard reed is likely to have the construction you need, so you just order Emmons Custom Made Reed and have the exact individual quality you need *built in*.

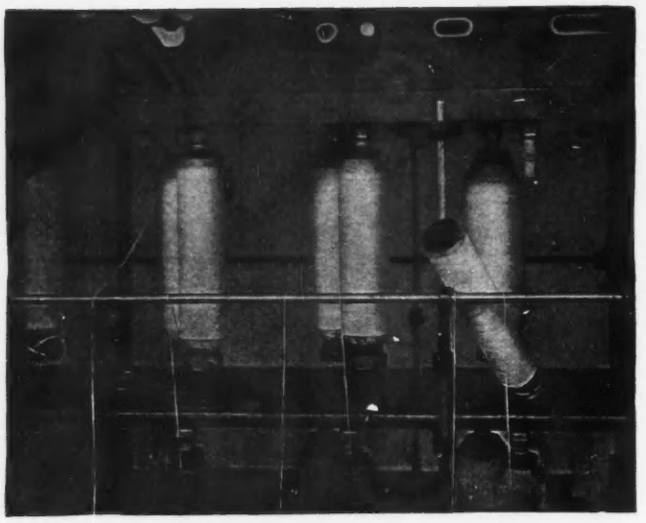
If you require reeds for quality production—a reed to fit the fabric and improve the quality—specify Emmons *Custom Made* Reeds.

QUICK DELIVERY

It takes no longer to get the Custom Made Reeds than ordinary reeds; modern Precision Machines play a part in speeding up delivery without sacrificing accuracy.

Try Emmons Custom Made Reeds on your next order—you can always change back if you like. It may be that these individual reeds are just what your weavers have been looking for to speed up production and improve quality.

Emmons Loom Harness Co.
LAWRENCE, MASS.



No more splintering skewers.

WOOD skewers and their supporting cups are no longer necessary, in roving, spinning or knitting. Eclipse Ball Bearing Bobbin Holders, suspend each package of roving from the overhead creel boards, without any bottom supports.

Every package runs smoothly about its true centers. The clear space beneath it gather no bunches of lint to cause broken ends and lowered production.

Every strand of roving pulls evenly without overstretching. Consequently a stronger, better grade of yarn results.

Eclipse Ball Bearing Bobbin Holders fit any standard spinning, roving or knitting frame. Try one and compare its performance with that of your present holders. That's a fair test.

Send for descriptive bulletin.

ECLIPSE TEXTILE DEVICES, INC.
ELMIRA, N. Y.

BOBBIN HOLDERS